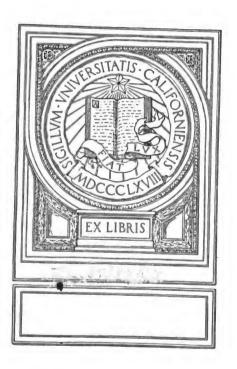
027 518







•



iniv. of California

FLORICULTURAL MAGAZINE,

AND

MISCELLANY OF GARDENING.

EDITED BY

ROBERT MARNOCK,

CURATOR OF THE ROYAL BOTANICAL SOCIETY OF LONDON, INNER CIRCLE, REGENT'S PARK; LATE CURATOR OF THE BOTANICAL AND HORTICULTURAL GARDENS, SHEFFIELD.

VOL. V.-1840-41.

LONDON:
R. TYAS, PATERNOSTER-ROW;
AND RIDGE AND JACKSON, SHEFFIELD.



G. RIDGE, PRINTER, SHEFFIELD.

To West

PREFACE.

No Student of Botany, or Floriculture, has hitherto acquired that consummate knowledge of nature, to enable him to say the field of discovery and investigation exhibited a tendency too narrow, and the boundary beyond which the science could not be carried, was visible before him. That this has never, in any instance, been the case, all past experience abundantly testifies. Fact, after fact follows in the rear of its predecessor, and discovery rolls on like a mighty stream, proving with a force irresistible, that its resources are boundless. Who dare set a limit to the beautiful forms that may yet be poured forth from the vast tracks of our globe, still unexplored? or who will venture to predict that nature has been "over-worked," and that she will in future resist all the efforts of Floricultural skill? We think Floriculture has only just displayed its opening bud; and when we reflect on what has been effected by the Dahlia, the Pansey, the Calceolaria, the Fuchsia, and Geranium, we have bright hopes with respect to the full expanded bloom.

In completing another Volume of the FLORICULTURAL MAGAZINE, we, therefore, beg to return our best thanks to our numerous contributors, and we still invite the continued cooperation of all who feel an interest in flowers. We refer with satisfaction to the improvement which has been effected in the

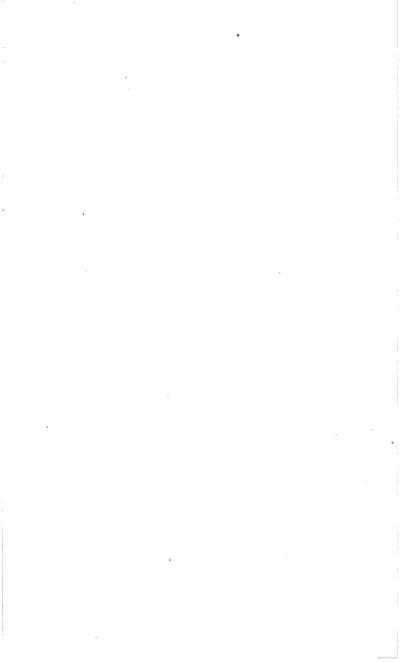
present Volume; and we have made arrangements, by which we hope the next will be superior in every respect to any that has preceded it.

ROBERT MARNOCK.

No. 7, Broadley-street, Blandford-square, April 12th, 1841.

INDEX TO EMBELLISHMENTS.

COLOURED TITLE PAGE.					FIGURES.		
Agave Americana, var.	•••		•••	•••	1	•••	133
Azalia Smithii var. splende	ens	•••	•••	•••	1	•••	253
Brunonia Australis	•••	•••			1	•••	156
Dianthus Gaulthesii	•••	•••	•••		2	•••	182
Fuchsia Stylosa conspicua	•••	•••	•••		1	•••	16
Geranium, Rival King	• • •	•••	•••	•••	. 1	•••	65
Salter's Beauty	of Bat	h	•••	•••	2	•••	65
Ixia grandiflora	•••	•••	•••	•••	2	•••	43
Ipomœa Learii	•••	•••	•••	•••	1		108
Lythrum roseum var. super	bum	•••	•••	•••	2	•••	87
Lobelia unidentata	•••	•••	•••	•••	1	•••	182
Nepenthes, (New Species)	•••	•••	•••	•••	1		230
Pansy, Tillery's Criterion	•••	•••	•••	•••	3	•••	43
Lady Mary Bentinck			•••	•••	1	•••	207
Nonpareil		•••	•••	•••	2	•••	207
Silene Compacta	•••	•••	•••	•••	3	•••	65
Styphelia tubiflora	•••	•••	•••	•••	2	•••	254
Thunbergia aurantiaca	•••		•••	•••	2	•••	16
Verbena amœna	•••	•••	•••		1	•••	43
scabra	•••	•••	•••	•••	3		87
4minumphone							07





THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. XLIX .- JUNE, 1840,

ORIGINAL COMMUNICATIONS.

REMARKS ON THE HARMONY OF NATURE AND EVIDENCE OF DESIGN IN THE WORK OF CREATION.

BY E. F.

The study of Nature is beginning to be more appreciated than formerly, and the Naturalist is now no longer taunted with "cui bono," because the spread of general information has more extended itself into these subjects. Ignorance and indifference are intimately blended together. Before a person has some knowledge of the wonders of Nature he has no taste for the study, but as soon as he begins philosophically to enquire into these subjects, he begins to attain a correct sense of this noble and elevating studyby the light of science every thing gradually changes its appearance, and all Nature seems to inspire into his heart new feelings. The simplest flower, which he before viewed with indifference as merely the covering of a clod, he now finds to be a world of wonders, whereon he can find employment for his reasoning faculties, of a more valuable and refined nature than on the most sublime productions of Art. It is a study which, more than any other, serves to raise his conceptions of the wisdom, power, and goodness of that Great Being who is the author of Nature. Who unmoved can look upon the beauty and grandeur of Nature?when

• Lo! the morn
In clouds of crimson radiance borne,
Hath risen from the couch of night,
And fills the air with fresh delight;
While hnes-like harmonies that range,
The world of sound with heavenly change,—
In varied lustre o'er the sky,
Awaken, mingle, melt, and die;

2 on the harmony of nature.

Till full orb'd on his flaming throne, The sun-king is beheld alone; And blue as Baltic waves asleep, Before him lies a dazzling sweep, Of azure in its deep excess, Of morn created loveliness.

When.

On each unruffled bough is heard, The lay of some melodious bird; And young wing'd breezes as they float, From brook to meadow, learn a note; And streams-like tides of gladness flow, And in the air there dwells a glow Of elemental youth and joy, Unchill'd by one corrupt alloy,"*

Whether we view Nature as one harmonious whole, or examine her minutest parts; whether we mount the observatory with the Astronomer, and view the starry heavens; descend into the mines, caverns, and deepest recesses of the earth with the Geologist, and investigate its crust, and observe the nature of its strata; the aboratory with the Chemist, and examine its constituent parts; the menagerie with the Zoologist, and study animated nature; or whether we penetrate into the shades of the forest, scale the mountain tops, or perambulate the fields with the Botanist, we find evidence of the same truth at every step, that "it is the Lord's doing, and it is marvellous in our eyes."

If we take a view of the Vegetable Kingdom in connection with the Mineral, and the Animal in connection with the Vegetable, we shall perceive a striking illustration of the Harmony of Nature.

The Mineral Kingdom is undoubtedly one of the grandest parts of the work of Nature, for it is the medium through which all organized matter, whether animal or vegetable, derives its vitality. The vegetable derives its support from the mineral, and the animal from the vegetable. The matter which composes the Mineral Kingdom possessing none of those properties which in the Vegetable we call vitality and in the Animal life, having in itself no inherent power of action, and because without suffering in any way except in size and weight, the parts composing a mass may be bruised, separated, and even ground to powder, and each part would, in proportion to its bulk, continue to possess its usual power of attraction, cohesion, and gravity, is called inorganic; whilst organic matter, if so treated, would in animals cause death, and vegetables would lose that vitality and action necessary to their preservation, in which cases decomposition would take place

(though not immediately in some vegetables), and they would become subject to the laws of inorganic matter.

When a seed is sown (let us suppose it to be a seed of a forest tree), if supplied with the necessary degree of heat, moisture, and atmospheric air, it commences the process of germination, by absorbing moisture from the earth; the embryo begins to swell, the radicle to protrude downwards, and the cotyledons to appear above the surface of the earth, the plumula expands, and the whole plant gradually increases in size. When the development of the roots are completed (for before, the principal nourishment the plant derives is obtained from the farinaceous substance contained in the cotyledons, diluted by the moisture they have absorbed), they begin to derive nutriment from the earth through the roots, by means of capillary attraction, which must necessarily be either æriform or liquid, for the organs of absorption are so small as to admit of no denser substance than liquids, which should hold in solution portions of decayed animal or vegetable matter to enable them to thrive; hence recourse is had by gardeners to different kinds of manure. The sap is next conveyed by means of numerous small tubes through the albumum of the plant, circulates through the leaves, and is by them exposed to the atmosphere to evaporate the superfluous part; and when the winter arrives and the growing is suspended, the leaves having done their office, fall off, and the various parts of the plant gradually become harder, and form themselves into wood and bark.

During the next year the same process continues, with regard to the young wood; but in the wood of the last season the sap, which ascends in the albumum, returns between the bark and the wood and joins the cortical layers or inner portion of the bark, that is in exoginous or dicotyledinous plants, which division comprehends all the large trees of this country. Thus the wood being formed in concentric circles, by an annual addition to the outside of the stem, there are observable, in a horizontal section, the trunk circles, indicative of the age of the tree, called the spurious grain.

The tree obtains its nutriment by the same means, and the sap circulates in the same manner during the third and every succeeding year, until it has attained maturity.

Decomposition is the next change which vegetables undergo,

which naturally takes place at different ages in the various kinds of plants, some being annuals while the larger trees attain a great age: when being mixed with the common mould, they become, in their turn, the food for future vegetation. But the portion of vegetables, which goes for the food of animals is, perhaps, still more wonderful. Part of what an animal eats, after passing through his intestines, is returned to the earth, and used as manure for plantspart is rendered æriform, and is emitted into the atmosphere through the pores of the skin, while the rest enters into the constitution of his body, and causes it to increase in size. When he falls to the ground and dies, innumerable little creatures appear, and chemical agencies commence their work to remove what is now become a nuisance from the earth. In a short time all has disappeared except the bones, and perhaps the hair; and the insects, which performed so great a part in the work of separating its various parts, are for the most part dead themselves. But what has become of this great body? No portion is wasted, not a particle is annihilated. Part is received into the ground, and the rest, in the form of gasses, is dispersed throughout the atmosphere. each to be received again into vegetable circulation, and to be the support of future generations.

Although we know that the sustenation of organized matter is derived from what was originally inorganic, and that a few simple elements, intimately blended together in different quantities, constitute all the infinite varieties of forms and colours in the vegetable world; and that the whole sustentation of the whole Animal Kingdom is obtained, directly or indirectly, from vegetable food; yet human powers are inadequate to the discovery of the secret mystery that communicates life to passive matter.

But the revolutions which matter continually undergo are not the only harmony observable in the system of Nature, every part is replete with instruction; and the careful observer finds everywhere the same symmetry, harmonious economy, and marks of Divine Intelligence.

E. F.

Meviod, May 4, 1840.

[Vegetable physiology is one of the most interesting subjects that can engage the attention of an intelligent mind, especially when it is viewed as part only of the grand scheme of Creation. We shall be very glad if our Correspondent will continue his remarks.—ED.]

ON THE CULTIVATION OF GREEN-HOUSE PLANTS.

Pimelia.—This handsome family of plants will, with ordinary care, grow and flower freely; and few plants better repay the cultivator for his care and trouble. Use, when potting (which should be done early in spring), some good turfy peat, well broken with the spade, but not sifted; mix with it a good quantity of sand, if it do not contain it already: when potting, take care you do not injure any of the young fibres. Drain the pots well, which should not be over large; place a little mould over the drainage, then place the plant in the pot, and tightly press the mould between the old ball and the pot, if the mould is quite dry, which it ought to be-it cannot be pressed too tight; if a plant is loosely potted, and holes left between the old ball and the pot, the plants never thrive well. When potted, give them a gentle watering, and place them in the green-house, where they can have plenty of light and air; and never, on any occasion, should they be crowded among other plants, but should stand perfectly free. They also require to be kept in the house during summer, and to be shaded a few hours each day from the powerful rays of the sun. Cuttings simply prepared, planted in sand, and covered with a hand-glass, placed in the propagating house, will root freely .--Pimelia discussata, longifolia, glauca, hispida, and sylvestris, are very superb plants.

Gardenia.—Most of this genus are hot-house plants, except two species, namely, G. florida and G. radicans, which are best kept in a cool pit, from the time they go out of flower till it be desirable to make them form flower-buds for the succeeding season, when they should be shifted into fresh mould (sandy peat suits them best), plunged, or rather set, on the surface of a pretty strong bottom heat, a moist steam heat being kept up in the pits, and the lights kept rather closely shut. They will, by this means, show abundance of bloom buds, and beautiful fresh foliage; and when they are just about coming into bloom, if removed to the greenhouse, they will continue longer in flower, and perfume the house with their delightful fragrance. They are readily propagated by cuttings of the last year's wood, planted in very sandy peat, without glasses, in a humid, rather warm atmosphere. Gardenia florida and radicans are the only greenhouse species.

Strathiola.—This pretty genus of Cape plants has of late years been rather neglected. It is a fact too generally known, that many of our old beautiful plants are nearly lost sight of; while plants much inferior to them are substituted in their stead, merely because they The subject of this remark I have with pleasure seen The soil that suits them grown to perfection in a few collections. best is equal parts good fresh loam and peat, with a little sand, sifted and well mixed together; drain well when potting, and make the mould firm about their roots, as recommended for Pimelias; keep them in a light and airy part of the green-house during summer, and never place them out of doors, as it is almost sure to kill them, they being very delicate plants, particularly S. erecta. In winter, they require to be kept in a light and airy part of the house, perfectly free from damp, as damp is almost sure to kill them: very often, half the plants will damp away. This is frequently the case with S. erecta; but if potted, and carefully managed, they will soon grow, and flower freely. Cuttings placed in sand, much in the same manner as Heaths, will root freely: about the middle of January is the best time to put them in, as I have found it difficult to propagate some of the species at other Strathiola erecta, ovata, virgata, pubescens, and tomentosa, are among the best.

Lachenaultia.- The two species of this genus with which I am acquainted, are free growing and free flowering plants, and will succeed admirably potted in sandy peat, and placed in the greenhouse, and attended to like Strathiolas and Pimelias. A few may be turned out of doors with the miscellaneous green-house plants during summer. I have had them also to grow and flower freely, turned out of their pots, into clumps, in the flower garden, where they look, indeed, both neat and pretty; though it must be admitted they succeed, at all seasons, best in the green-house, as it seems to be their proper habitation. Cuttings of the half-ripened wood, prepared and put in sand in the same manner as Heaths. put in at any time during summer, in a cold frame, and not covered with glasses, will root freely. Lachenaultia formosa, and oblata, are the only two with which I am acquainted; and the difference between them, if any, is very little.

ON THE CULTIVATION OF THE PINE-APPLE.

BY T. M.

The Pine-Apple, in common with most other plants, may be raised from seeds, but the more general modes of obtaining and keeping up a stock of plants, is by means of suckers, which are produced plentifully on the stems and crowns which are formed on the summit of the fruit. The former of these are, however, preferable to the latter, inasmuch as they produce fruit sooner. and owing to the frequently diminutive size of crowns, suckers generally produce the strongest plants. In separating them from their parent stem, it is necessary to pull gently sideway, in order to detach them without injuring at their base, which latter should be fully matured, and assuming a brownish tint before they are in a state fit for planting. The exact time of performing this is a matter of slight importance, provided they are thus matured; but generally speaking, those produced on plants which ripen their fruit in summer, are in a fit state during the months of August and September. On plants which perfect their fruit at a later season, they are not generally matured, and in that case are better deferred till February or March. At whatever time they are taken off, proceed to pot them in light dry soil, in pots varying according to the size of the suckers, those known as 48s, will be suitable to the majority. I cannot approve of the practice of laying them to dry before planting; in my opinion it is quite unneeded, and by depriving them of the nutriment stored up in the foliage, tends very much not only to retard, but to weaken their growth. When all are planted, plunge them in a brisk bottom heat, keep them as close as possible, and attend to shading them till they begin growing; very little water in the pots is needed till this is the case, but a slight occasional syringing round the sides of the pit before covering at night, will be beneficial in producing a general moisture, without which a high temperature is injurious. This atmospheric moisture must be regulated with caution, especially as the winter approaches, otherwise if carried beyond due bounds, its effects will soon be injuriously apparent.

When they have commenced growing, and the roots thicken on the sides of the balls of earth, they will require shifting into a size larger pot, and allowing plenty of room for a free circulation of light and air. Abundance of the latter admitted with care as the season and weather may permit, to produce a strong and healthy growth, with a gentle bottom heat; moderate refreshments of water, applied with great caution as each plant may require it, (usually in winter about once in ten or fourteen days, in spring once a week, and twice in summer); a moist humid atmosphere, kept up by syringing the pipes and sides of the pit; shifting into a larger pot when the roots thicken on the ball of earth; covering at night in cold weather; a slight shading in the heat of the day in summer; and a temperature ranging from 60 to 65 degrees in winter, 65 to 70 degrees in spring and autumn, when growing freely, and 70 to 75, or 80 degrees in summer, (allowing from 5 to 10 degrees, according to the season, for the effect of sun heat,) kept up by means of the hot water apparatus. These may be said to comprise the leading points of cultivating the Pine-Apple in its first stage-the nursery pit.

The treatment of crowns may be assimilated with the above, with the slight exception of their being kept a day or two to allow the fleshy part of their base to become a little firm and dry. Plants raised from crowns are longer in arriving at a fruiting state than suckers, and hence the latter are most generally preferred.

Many of the suckers planted in August, as above, will probably be advanced sufficiently to receive their first shift in October, at the same time the bark or leaf bed is made up for the winter. In most cases this may be expected to require repeating in March or April, as hereinafter directed; the state of the roots being at all times taken as the guide in performing this operation. As vacancies occur in the succession house, by removing these plants to supply any blanks in the fruiting stove, they are to be constantly filled up with the largest and best plants selected from the nursery stock.

Succession Pit.—Their treatment in this structure is merely a continuation of the above. In the spring shifting before noticed, it is necessary to remove carefully the outsides of the balls, and to examine and cut clear away any root-lets that may either be decayed or decaying. This point is to be borne in mind at all future pottings. I disapprove of the practice of disrooting altogether at any period of their growth; but as the roots of the pine are pro-

duced continuously from the bottom of the stem upwards, my opinion is that the removal of the extreme base may be advantageous. I am perfectly convinced that by the removal of the decayed roots, which will be chiefly found at the bottom, and stripping off two or three of the lower leaves, and setting the plants rather deep in the pots, plenty of vigorous fibres will be the result. The renewal of the bark bed will at this period be an important operation; it must always be regulated by the heat contained in the bed, and may accordingly be deferred a week or two, or otherwise, for too much or too little bottom heat is alike injurious. A steady temperature should be kept up, ranging from 60 to 75 degrees, and a constant supply of fresh air admitted at every opportunity. Water, in small quantities, as often as they require it. which will entirely be governed by the weather. On this point Speechly observes, that " Plants lately re-potted till the roots become thick, require less water than before shifting. Plants in large pots, in proportion to the size, do not require so much water as those under potted. Plants in a vigorous growing state, require frequent and gentle waterings; but in all cases, less should be given in moist than in dry weather, as the humidity of the atmosphere, in a great measure, supplies the place of water at the roots: on which account recourse should be had to the production of artificial dews, by syringing the hot water pipes and sides of the pit several times every day, (except in the heat of the sun,) and also over the plants with the finest cap, once, twice, or three times a week, in warm dry weather. By this I do not intend the application of so great a quantity of water, as to produce an injurious effect, it should be applied with moderation in spring and autumn, more freely in summer, and almost entirely discontinued in the winter season; at any time a moderate sized watering-can full of tepid water will be sufficient for a house containing a hundred plants. The pipes, &c., should, however, as before observed, be damped several times a day. Shading of succession plants forms an important feature in their treatment. It has been observed that they do not make half the progress in hot sunny weather that they do in spring and towards autumn, when the sun is not so powerful; to obviate this, a thin covering should be used in the middle of the day in hot weather, to break the rays of the sun, but not thick enough to exclude light.

By rigidly pursuing this treatment till the middle or end of August, it may be anticipated that the plants, or rather roots, will be in a condition to receive their last shift into the pots in which they are to produce fruit; at the same time, or soon after, they are to take their position in the bark bed of the fruiting stove, which is to be prepared for them as soon as the major part of the ripening fruit has been cut; at this shifting the pets generally used are eleven inches wide at top, by ten deep.

It is necessary here to remark, that the largest plants from the succession pits are here spoken of as being intended for the fruiting house; and their place is again to be filled up from the nursery department. This treatment being annually repeated, it follows, that whilst many of the suckers taken off the autumn previous, are now to take their place for fruiting, a considerable proportion will possibly not be sufficiently advanced, and must, consequently, remain till the next remove; in this case they require repotting into the same pots, and their former treatment resumed.

Most cultivators agree that a rich loamy soil is requisite to grow the Pine successfully. I prefer one composed as follows:—Two barrows full of sandy loam, being the surface of a pasture; one ditto of sheep or pigeons' dung; half ditto of coarse sond. In shifting, drain the pots well with two inches of broken potsherds, and on that a layer of turf, broken small. Set the plants rather deep in the pots, and cover the surface and about the stem with another layer of turf, which holds the plants firm, and readily admits the water to percolate through into the soil beneath. My reason for preferring a soil rather porous than otherwise, and attaching so much importance to drainage, is simply because no plants are more injured by stagnant water at the root than the Pine; at the same time it requires a liberal supply, both whilst growing rapidly and swelling its fruit.

Liquid manure is highly beneficial, if judiciously used, and the water made use of must be tepid at least from September till May.

Fruiting Stove.—The plants being as already noticed, shifted and plunged in the renewed bark bed of the fruiting stove, will require moderate refreshments of water every eight or ten days, decreasing it as the short dull days draw on. Fresh air must be admitted with discretion on all mild days, and from sixty-five to

seventy degrees of heat kept up during the winter season. the month of March the plants will many of them be showing fruit, and if their treatment has been properly attended to, they will do this without any lowering of temperature or suspension of watering; these practices cannot be too strongly condemned, reducing as they do the plants to a state of imbecility and weakness, at the very time they should be in their greatest vigour to form the rudiments of the fruit. If sufficient attention has been paid so that the roots may have filled the pots, at or about the time at which it is desired they should show fruit, there will be no occasion for using unnatural measures, by checking the growth of the plants. During the time they are in flower, no water should be given over-head; but when the fruit has fairly set, they may be occasionally syringed freely, until it is necessary to withhold water entirely, keeping the temperature from seventy to seventy-five or eighty degrees, and liberal watering at the roots, together with a generous use of that element about the pipes and pathways, to produce a genial atmosphere, to swell off the fruit to its fullest perfection, are the chief attentions required. This liberal treatment must be suppressed, however, as the fruit approaches maturity, or the flavour will be deteriorated. Water given in less quantities must be gradually withheld, and the atmosphere rendered somewhat arid. To retard the ripening of the fruit so as to keep up a succession, part of the plants may be taken from the stove when nearly ripe, and set in a dry shed, the pots covered with damp moss, but no water given. It will be needful to return them to the stove for a week before the fruit is cut, to heighten the poignancy of its flavour. After the fruit is fully ripe, cut off the leaves near the stem, to encourage the growth of the suckers, from two to three of which should have been retained, whilst the rest should have been removed as soon as they appeared. When these are matured, take them off, and if quite hard at the lower end they may be potted immediately.

I shall be happy for any reader publicly to suggest any improvements he may perceive on the system here imperfectly detailed.

T. M.

[[]We are sure this paper will be of great service to amateurs and others who are cultivators of this noble fruit. We cannot quite subscribe to the plan of non-disrooting of the Pine apple; it must, of course, depend on

circumstances. One thing we have always found to be the case, that a disrooted plant, after being again plunged in a gentle bottom heat, very soon recovered new roots, and invariably grew more vigorously than such as were not disrooted. The reason seems obvious, with respect at least to the larger growing kinds; the roots of the Pine-apple may be said to be annual, and, by being removed once in the course of three years or less, and having fresh earth supplied, they become more than usually vigorous and healthy.

These remarks apply to the stronger growing kinds only, such as the Providence Jamaica, Envile Antigue, &c. The Queen and its varieties do not, under the management of most persons, require to be disrooted, because from suckers they generally produce fruit in about eighteen months; nevertheless we think it a most desirable object to attain, that is, as far as possible to induce the larger kinds to produce fruit sufficiently early, so as not to require disrooting. It is a well known fact, to those acquainted with the cultivation of this fruit, that young plants invariably produce, comparatively larger and more highly flavoured fruit than plants of greater age and larger size. We again beg to recommend this article to those who feel interested in the growth and culture of the Pine-apple, as the directions are thoroughly practical.—Ed.]

NOTES BY THE EDITOR.

May 16 .- Horticultural Society's Gardens, Chiswick .- This being the day fixed for the first Exhibition of the present season. the attendance of visitors was not so great as on some former occasions; but the number of tickets disposed of this year exceeded that of any former one, so that the two succeeding Exhibitions will, if the weather prove favourable, be unusually attractive.—The weather, on the present occasion, being showery, rendered the lawns wet, and thereby prevented many persons from attending. The Garden itself looked well, and the recent showery weather has brought out a flush of tender and beautiful foliage. The Exhibition in many respects was very good: there were some splendid displays of skill and industry to be seen, especially amongst the plants. The Geraniums, Heaths, Calceolarias, and Azaleas were superb. Amongst Geraniums we particularly noticed Gain's Gauntlet, very large flower; the Jewess; Jubba; Gain's Grand Duke, a dark variety; and, although an old variety, Dennis's Perfection. The Sylph was also exhibited, but not well in bloom. A seedling of Foster's was also exhibited for the first time; a dark variety, with stiff petals, not so round as could be wished .-

Persons who have not seen the mode of cultivating the Geranium in the neighbourhood of London, can form no correct idea of the size to which they are grown: the pots are from 12 to 14 inches in diameter, and the plants from 21 to 3 feet across, and about the same in height, full of foliage, close, bushy, and covered with bloom .- Amongst the Heaths we discovered a plant of Thunbergia. bushy, upwards of 3 feet in height. To find a plant of this species so large, is very unusual. It was brought from Mr. Norman's, of Bromley Common, by his Gardener, Mr. Barnes, who had many splendid specimens of various kinds at the Exhibition; also a very large plant of E. Elegans, from Messrs. Luccomb, of Exeter .-The Calceolarias were chiefly herbaceous.-Catleugh were grown in first rate-style, and were very splendid. One, named Alstone, we thought particularly fine. Mr. Lane, of Fulham, exhibited a collection of seedlings, very fine, mostly herbaceous. Mr. Standish, of Bagshot, exhibited a new seedling Fuchsia, in appearance resembling the fulgens, but with a more succulent stem and fleshy foliage, yet having the red or purple tinge throughout the whole plant; which is a remarkable characteristic of the fulgens. In habit it resembles lobelia jupa more than any other plant that we at present remember. On the ground of novelty and permanent interest, Mr. Smith, of Norbiton, produced the most striking feature, in his seedling Rhododendron-a hybrid between Azalia sinendis and Rhododendron ponticum album. The plant was about 3 feet high, with a single stem, bearing a cluster of yellow flowers at the extremity. The foliage is thin and glaucus underneath, resembling some of the varieties of Azalia frontica rather than A. sinensis: at least the foliage is, in appearance, more glaucus than that species. Amongst the scarce plants was exhibited a specimen of Mahonia tenurfolia, 5 to 6 feet high, but having only a single stem, and the foliage not very perfect. It does not appear to be generally known whether this will really prove hardy or tender.—The Conservatory recently erected in this Garden has a somewhat novel appearance. It is, we should suppose, nearly two hundred feet in length, and about thirty in width, with a bed in the centre, and a stupendous bath on each side. The bed is planted with Camellias and various Australian plants. It is glass on all sides, to within two feet of the ground, with the sash-bars forming a slight curve, and meeting at the top, representing a narrow Gothic arch, with ventilators in the dwarf-wall, supporting the glass, and at the side of the roof. This, we believe, is only a part of what is intended as a grand range of Conservatories. In this Conservatory we noticed a plant of Clematis azurea grandiflora, with flowers, the petals of which appeared to us distinctly different from the usual state of this plant. We cannot conceive that cultivation could produce this change. If it is not the result of peculiar treatment, it is certainly a distinct variety.

Such are the present facilities for travelling, that three or four hundred miles is now regarded only as a day's journey. We are led to make this remark from the circumstance that such meetings as the one in question should bring together Amateurs and practical Botanists from various parts of the country, and some from great distances. Some of those to whom we allude were Mr. Mc Nab, of the Royal Botanic Gardens, Edinburgh; Mr. Makay, from Liege; Mr. Cameron, from the Botanic Garden, Birmingham. Besides these, there were, no doubt, many others from a distance, but those whom we have just named we happened to see. We dare not trust ourselves to remark upon the advantages and general good to Gardening and Horticulture resulting from Exhibitions such as that to which we now refer. Notwithstanding all the evils of what is called bad management in the conducting of these Exhibitions (and this is a complaint which is universal,-at least, where Exhibitions are held, complaints of bad management are sure to follow); yet, notwithstanding all this, Exhibitions of Flowers are attended with great good to the science of Gardening. It has been our business to attend Flower-shows in many parts of the country, and in repeated instances we have seen superior productions, displaying great care, skill, and industry; but nowhere is there any thing at all equal to specimens which are brought together at the principal shows around the metropolis, and this is wholly owing to the effect of competition, stimulated by a desire to excel.

Horticultural Society for Stamford Hill and the Neighbour-hood.—We were invited to attend this Exhibition as one of the judges; it is held for the present in Wood-street, Clapton, this situation being considered the most central for the subscribers. Although this Society is supported and conducted by amateurs,

and, therefore, not an avowedly Public Exhibition, we have been permitted to make such remarks as may appear to us to possess general interest to our subscribers, without entering into particulars respecting individual exhibitors. We were told that the articles for competition were less numerous than usual. There was, however, a very good display of Geraniums, many of which were well grown, and in very good bloom; amongst the seedling Geraniums were several flowers possessing merit, especially one belonging to an amateur, who is a successful cultivator of this beautiful family. There were also collections of Heaths, Cactii. Calceolarias, with single specimens of greenhouse plants. Not a few of the productions were of considerable merit, and the rooms on the whole were calculated to display the flowers to advantage; nevertheless we are inclined to think it deserves the attention of the Council, whether or not a situation possessing more advantages in this respect could not be selected or provided. We might venture to enquire, why the attention of some wealthy landowner in the neighbourhood has not been directed to the question, whether it would not be worth his while to make some arrangement with this Society, so as to enable them to provide a suitable and convenient situation, more or less ornamented with trees, lawn, and a few walks, sufficiently extensive, so as to adapt it for a place of general resort for air and exercise. There is scarcely a provincial town in the kingdom without its garden or its public walks, where the inhabitants, who choose to avail themselves of this privilege, may enjoy air and exercise, free from the common annoyances of public highways, and also where they might have an inexhaustible store of amusement, and instruction in the study of flowers and trees. Hackney, Clapton, and its neighbourhood, if we are correctly informed, contains upwards of one hundred thousand inhabitants, and a much larger portion of these are persons of wealth and leisure than are to be found in the vicinity of provincial towns. It does not, therefore, appear that the advantages of such a place of recreation would be less valuable to those who could avail themselves of it, or less to be supported if established. Nothing more than the plan of an ornamental Garden, with a lawn sufficiently extensive to admit of an erection, either permanent or temporary, for the display of the various articles for Exhibition, would be required, and yet such a place would afford all the accommodation, and much of the attraction, of a more expensive Garden. It is, however, wandering from the subject with which we set out: we may, therefore, observe that the Shows held here are five during the season, the first in April, and the others in May, June, September, and November.

EDITOR.

REFERENCE TO PLATE LI.

MAY'S HYBRID FUCHSIA, Stylosa conspicua.

NAT. ORD. ONAGRARIE. LINN. CLASS. OCTANDRIA MONOGYNIA.

For this splendid Hybrid Fuchsia we are indebted to Mr. May, of Hope Nursery, Leeming-lane, near Bedale, who has been exceedingly successful in raising Hybrid Fuchsias. It is not in our power to give a description of the plant figured this month, but we shall recur to it again in our next number.

THUNBERGIA AURANTIACA.

NAT. ORD. ACANTHACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This very handsome twiner has produced its beautiful blossoms with us during the present spring. This has not only the charm of novelty, but is decidedly an ornamental plant of very great beauty. Thunbergia is a popular genus. Who does not know the beautiful climber with the buff-coloured flowers and jet dark eye! Mr. Low, of the Clapton Nursery, has a new variety of the alata, with pure white flowers, having no dark mark in the centre like T. lucantha.

Thunbergia aurantiaca, like the other species of the genus, increases by cuttings; but plants raised from seed generally do much better than those raised from cuttings.

It is stated that seeds of this species were received among many others from the Cape of Good Hope, by Michael Clyton, Esq. of Charlwood Park, Crawly. Sussex.

NOTICES OF NEW PLANTS.

SOLANUM CRISPUM, Wavy Solanum.

Bot. Mag.

NAT. ORD. SOLANEÆ. CLASS PENTANDRIA MONOGYNIA.

This ornamental plant is a native of Chili, and is found in waste places in Conception, in the Island of Chiloe, &c. It was introduced to our gardens by Mr. Anderson. It proves to be a hardy plant, even as far north as the highlands of Argyleshire. We have known this plant for several years, and can recommend it as one deserving of extensive cultivation. It is half shrubby, and a most rapid grower. The flowers are pale lilac.



Mans Hadrid Fuchin while 1. 5.11

Jal Pasam

UNIV. OF CALIFORNIA MONACANTHUS ROSEA ALBUS, White and rose-coloured Monk flower.

| Bot. Mag.

-NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONANDRIA:

This bears whitish green bearded flowers; it is a native of Para, in Brazil, and was received from thence at the Glasgow Botanic Garden. Sir William Hooker has given it the name of Monacanthus, on the ground of consistency, but thinks it ought to be Catasetum, Sect. Monacanthus.

MANDEVILLA SUAVEOLENS, Sweet scented Mandevilla. [Bot. Mag.

NAT. ORD. APOCYNEÆ. CLASS PENTANDRIA DIGYNIA.

It would appear that botanically as well as in external appearance, this plant is nearly allied to the genus Echitus, and had been named so by Sir Wm. Hooker, but who has here adopted the name given to it by Dr. Lindley. It has been received at the Glasgow Botanic Garden from Buenos Ayres, but it is not supposed to be a native of that country. The flowers are, popularly speaking, like those of Convolvulus, white, and the plant appears to be a strong growing climber with opposite leaves.

GREVILLEA DUBIA, Dubious Grevillea.

Bot. Mag.

NAT. ORD. PROTEACE E. CLASS TETRANDRIA MONOGYNIA.

A slender habited, and, we should suppose, a graceful plant, with small oval leaves and pinky rose-coloured flowers, which latter appear to be produced in great abundance. It is nearly allied to G. puncea. It has been introduced to the Botanic Garden, Edinburgh, by seeds transmitted by Mr. Cunningham.

VERBASEUM TAURECUM, Taurian Mullein.

Bot. Mag.

This is a new mulleion, nearly allied to V. phœniceum, and doubtful as a species. The flowers are of a purplish rose colour, and is no doubt an ornamental plant when seen in the open border. It is cultivated in the Botanic Garden, Edinburgh.

EPIDENDRUM PATANS, Spreading flowered.

NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONANDRIA.

A yellow flowered species, not very ornamental, a native of Jamaica and Trinidad, and at present cultivated in the Edinburgh Botanic Garden.

CYMBIDIUM PENDULUM, Thick leaved Cymbidium.

Bot. Reg.

NAT. ORD. ORCHIDE ... CLASS GYNANDRIA MONANDRIA.

This is certainly an ornamental species, having long leathery leaves, and racemes of pendulous orange and rose coloured flowers. It is quite distinct from all the other species of the genus. Its nearest ally is C. aloefolium, but from this it is also quite distinct.

CALOSTEMMA CORNEUM, Flesh coloured Calostemma.

Bot. Reg.

NAT. ORD. AMARYLLIDACEÆ. CLASS HEXANDRIA MONOGYNIA.

This is a very handsome Amaryllis like plant, bearing a terminal cluster

of reddish flowers. It is a native of Australia, and has been bloomed in a cold pit in the Gardens of the Horticultural Society, at Chiswick.

This is one of the most beautiful little hardy plants that we know. The yellow globe-like blooms continue in perfection for several weeks, at least this is the case with our plants; they are yellow, and the foliage is produced in clusters. For a peat bed we do not know a more beautiful plant. The description before us is accompanied with the following remarks, which we take the liberty of transcribing. "When cultivated in the open border it forms a neat little shrub, from one to two feet high, with slender decumbent branches, and it flowers freely about the middle of May, particularly if planted in the American border or on rock work; but it must have some protection from the parching heat of the sun during summer. It is easily

increased by layering or by seeds, if the following directions be attended to:
—Firstly, the plant should be layered about August, always choosing a moist or dull day when the operation is to be performed, and using a little white sand for making that part of the soil round the layer light. The layers will be two years before they are well rooted and fit to remove from the mother plant. Secondly, the berries should be sown as soon as they are ripe, which is about August, in pans or pots filled with good loamy soil, and placed in any cold pit or frame during winter. They will require no more care or trouble, as they will not vegetate before the spring; but should the seed not be sown before the spring, which is a common practice, they will not vegetate for twelve months, and then very weakly, if at all."

CENTAUREA PULCRA, Beautiful blue bottle.

Bot. Reg.

NAT. ORD. COMPOSITER. CLASS SYNGENESIA POLYGAMIA.

A pretty hardy hardy annual, with deep blue flowers, raised in the Horticultural Society's Garden, and blooms nearly all the summer.

DAHLIA GLOBRATA, Smooth Dwarf Dahlia.

Bot. Reg.

Any plant whatever, if connected with the popular genus in question, cannot fail to be productive of interest. The figure before us represents a new feature in this genus, which may ultimately be productive of additional interest in the genus in question. The plant has been raised in the Horticultural Society's Garden, from seeds transmitted from Mexico, by G. Frederick Dixon, Esq.; this is now the third additional species recently added to the genus. We must again take the liberty of making the following quotation on this genus. "It is evidently different from D. scapegera, a new species from the same country (Mexico), in its lapinnate and branching habit, and also from D. Barkeriæ, another of very recent introduction, in its smoothness and fistular stem, nor does it appear probable that it should be a mere variety of D. variabilis, whose endless offspring have filled the gardens with gay autumnal flowers; at least it appears to differ from that variable species, not only in its naturally dwarf habit and perfect smoothness, but also in its roots, which have fangs slender and uniform in size, in...tead of being partly large and succulent, and partly resembling fibres.

There can be little doubt that this and D. scapigera will give birth to quite a new race of garden Dahlias, in which dwarfness, so much to be desired will not be an accidental deviation from a natural tendency to acquire a lofty, but will be a fixed habit, which may possibly, and indeed probably, will, increase till varieties shall have been secured, whose height, when in full

flower will not exceed a foot.

In its present state, this pretty plant grows about three feet high, and requires the same management as the common Dahlia, it flowers from the

end of July until destroyed by the frost in autumn.

i- It answers remarkably well if treated as a half hardy annual, which is by far the easiest and best way of growing it, as by saving the seed every season, there is no necessity for preserving the old roots, which are like those of the common Dahlia, but much slender." If the plant in question have any affinity to the sportive habits of the common Dahlia, the original species will soon disappear if the plant be perpetuated by seeds only.

GASTROCHILUS PULCHERRIMUS, prettiest Gastrochilus | Paxton's Mag.

NAT. ORD. SCITAMENIEÆ. CLASS MONANDRIA MONOGYNIA.

This very ornamental plant has bloomed in the stove of Messrs. Rollisson, of Tooting. The prevailing colour of the flower is white, slightly spangled with pink.

CATTLEYA LABIATA, VAR. ATROPURPUREA.

| Paxton's Mag.

NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONANDRIA.

This is certainly one of the most splendid, if not the most beautiful of all the orchidaceous plants. The flowers are very large, of a pale lilac, with a

deep purple lip—a most magnificent object. Mr. Low, of the Clapton Nursery, has been fortunate in introducing this variety, and we believe still possess saleable plants of it, with several novelties in the same way, recently imported.

ODONTOGLOSSUM MACULATUM, Yellow and Brown Odontoglossum.

[Bot. Rev.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA.

Another variety from the rich storehouse of Mr. Barker, who imported it from Mexico. It is one of the prettiest of the family, because of its two coloured spotted flowers and drooping habit, and seems to have much the manner of growth and constitution of an oncidium. It is a native of Mexico.

PALVIA LENARIOIDES, Lenaria like Sage,

[Paxton's Mag.

NAT. ORD. LABIATEÆ. CLASS DIANDRIA MONOGYNIA.

This is a new and pretty species; indeed nearly all the Salvias with which we are acquainted are more or less ornamental, whilst some are really beautiful. The plant in question has blue flowers, and appears to be quite distinct to any thing we know amongst Salvias. The habit is rather slender, and graceful or trailing. It has been raised from seeds in Messrs. Hendersons' Nursery, Pine apple Place, supposed to be from seeds imported from South America.

CORRÆA HARRISII, Mr Herriés' Corræa.

Paxton's Mag.

NAT. ORD. RUTACEÆ. CLASS OCTANDRIA MONOGYNIA.

A description is here given of this plant, but no figure has accompanied it. It is of hybrid origin, raised from seeds obtained from the intermixture of the sexual organs of Correæ pulchella, with C. speciosa.

This was effected at Mr. Herriés, of Kingsbury, by Mr. Beaton. The whole stock of this excellent variety is now in the possession of Mr. Low, of the Clapton Nursery.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

CLEISOSTOMA MACULOSA.

Resembling in habit a small Vanda, with long stalked spikes, of yellowish brown blossoms.

SOLANUM BATACEUM.

Mr. Moyes, of the Durham Down Nursery, near Bristol, has fruited this plant, and says the fruit resembles both in size and shape that of a hen's egg, and it is thought it will prove valuable as an esculant for making sauce, like that of the Tomatoe. We have plants of this singular climber, which appears to resemble the genus Convolvulus.

BRASSIA VERUCEOSA.

This beautiful plant is in the possession of Messrs. Rollissons, of Tooting. It is highly ornamental, and will be figured in Mr. Bateman's "Orchidaceæ of Mexico and Guatemala." The plant is particularly graceful, and the flowers are of a clear greenish yellow.

CYCLOGYNE CONESCENS.

This is an interesting plant, said here to be herbaceous, but we believe we have seen the plant referred to, and do not consider it herbaceous, but shrubby, resembling a Galoga, or Clyanthus. The flowers are said to be violet or blue. If we do not mistake the species, it will be an ornamental plant. It is a native of the Swan River, and we believe is only at present in the possession of Mr. Low. of the Claoton Nurserv.

HYMNOCAULLIS HARRISONII.

This is a native of Mexico, and unlike anything yet known.

ARCTOSTAPHYLLAS NITIDA.

Several plants of this rare species have been raised in the garden of the Horticultural Society of London. This resembles the common Arbutus, but it is not at present ascertained whether it is sufficiently hardy to endure our winters. Should it prove to be hardy, it will be an evergreen of great interest.

PHILADELPHUS MEXICANUS.

A new shrub, with white flowers, and said to be rather graceful in its habit

MISCELLANIES.

The Hybrid, or cross-bred Fuchsias, bloomed here by me last summer, were raised from seed saved the summer previous, from F. grandiflora, impregnated with F. fulgens. Out of forty or fifty plants raised, six were selected as being decidedly distinct in their outward characters, habits, and blooms; they were the admiration of every person who saw them, and were generally considered superior to any known varieties, by the numerous parties who called here during their bloom. One was exhibited by me at the North Riding Horticultural Meeting, in July, and was awarded an extra prize. Like Fuchsia fulgens, they begin to bloom at the point of each shoot, and continue throwing out large bundles of flowers, as the shoot advances in growth; their footstalks are generally very long, some of them, including the blooms, which are intermediate in size, measuring 4½ inches long, which gives the plants which were grown, a truly elegant appearance. I found them grow well in a rich loamy compost, composed of equal portions of good green loam, sand, and old dung, and frequent re-potting, by which means, no doubt but they may be grown to five or six feet in a season.—Thos. Colley, Propagator, Hope Nursery.

Amongst the Cacti, or Cerii, the prickly angular speciossimus, the flexible flagelliformis, or whip plant, and the flat unarmed phyllanthocides are nearly the most dissimilar, yet they have produced mixed offspring, which readily bears eatable fruit of intermediate appearance, colour, and flavour. The fruit of the speciossimus is large, green, and well flavoured, round oblong; that of phyllanthocides is small purple, and very inferior; the mule from the former has purple fruit, of a medium size and taste. The cross from the former by flagelliformis is now ripening here, a short angular fruit, quite unlike that of the mother plant. The fertility of these crosses, and readiness to vary the appearance and taste of the fruit, though derived from such very dissimilar parents, is one of the most striking results of our experiments. I have had no opportunity of attempting to cross them with the plants called Echino-cacti, but I do not see a single point in the generic character given of those plants which can uphold it, and I believe them to be one genus with Cereus, and capable of intermixing, but I have had no opportunity of examining the flower of any of the plants called Echino-cactus myself. Amongst Melons I have had the Cucumis asmocarpus, from Mexico, bearing a small, eggshaped, white fruit, and a small flower and leaf, very different from the Cucumis melo, fertilized accidentally by its pollen; thus occasionally producing fruit of twice the natural size, with red flesh. Lobelia speciosa is a cross between L. siphylitica and fulgens, yet it reproduces itself abundantly. The more these facts are considered, and the more they are multiplied, as they will be by the daily experiments of cultivators in other genera, the more strongly will my original suggestions impress themselves upon every Botanist

who will look on the subject without prejudice, that the genera of plants are real natural divisions; that no plants which interbreed can belong to separate genera; that any arrangement which shall have parted such plants must be revised; that any discrimination between species and permanent varieties of plants is artificial, capricious, and insignificant; that the question which is perpetually agitated whether such a wild plant is a new species, or a variety of a known species, is a waste of intellect on a point which is capable of no precise definition; and that the only thing to be decided by the Botanist in such cases is, whether the plant is other than an accidental seedling, and whether there are features of sufficient dissimilarity to warrant a belief that they will be reproduced, and to make the plant deserve, on that account, to be distinguished by name amongst its fellows. The effect, therefore, of the system of crossing, as pursued by the cultivator, instead of confusing the labours of the Botanist, will be to force him to study the truth, and take care that his arrangement and subdivisions are conformable to the secret laws of nature; and will only confound him when his views shall appear to have been superficial and inaccurate; while on the other hand it will furnish him with an irrefragible confirmation, when they are based upon reality. To the cultivators of ornamental plants, the facility of raising hybrid varieties affords an endless source of interest andamusement. He sees in the several species of each genus that he possesses the materials with which he must work, and he considers in what manner he can blend them to the best advantage, looking to the several gifts in which each excels, whether of hardiness to endure our seasons, of brilliancy in its colours, of delicacy in its markings, of fragrance, or stature, or profusion of bloom; and he may anticipate with tolerable accuracy the probable aspect of the intermediate plant which he is permitted to create; for that term may be figuratively applied to the introduction into the world of a natural form which has probably never before existed in it. In constitution the mixed offspring appears to partake of the habits of both parents; that is to say, it will be less hardy than one of its parents, which bears the greatest exposure, and not so delicate as the other. But if one of the parents is quite hardy, and the other not quite able to support our winters, the probability is that the offspring will support them, though it may suffer from a very unusual depression of the thermometer, or excess of moisture, which would not destroy its hardier parent. Such is the case with the beautiful Rhododendron altaclarce, of which the mother was a cross between ponticum and catarobiense, and the father the Nepal scarlet arboreum. We now possess a further cross by the impregnation of altaclarce, by arboreum, which will probably come so near the father in its colour, that if, as expected, it should be able to endure our winters, we shall nearly have attained the result, which would be otherwise most likely impracticable, of acclimatizing the magnificent Nepal plant; for it does not appear that in reality any plant becomes acclimated under our observation, except by crossing with a hardier variety, or by the accidental alteration of constitution in some particular seedling; nor that any period of time does in fact work an alteration in the constitution of an individual plant, so as to make it endure a climate which it was originally unable to bear; and, although we are told that Laurels were at first kept in hot houses in this country, it was not that they were less capable of supporting our seasons than at present, but that cultivators had not made full trial of their powers of endurance.

The insects that attack Rose Trees are of several kinds, all very destructive, and all very difficult to destroy, principally because the means for their destruction are seldom resorted to till their ravages have commenced. The most numerous of these are the aphides, commonly called green flies, or plant lice, which are well known to all rose-growers. These insects lay their small black eggs in autumn, generally near the axils of the buds, so that the young brood may be conveniently placed for feeding on the tender shoots when they appear. In mild seasons, these eggs are hatched about the latter end of February, and the insects produced are few and inconspicuous, many being generally destroyed by the cold. Those that remain, after twice casting their skins, arrive at their

full growth about April, when they begin to breed. "According to Richardson, the first brood consists entirely of females, and each of these produces a numerous progeny without the assistance of the other sex. These, though themselves produced from eggs, are viviparous. A third generation appears in May; and the months of June and July each supply two more. In the autumn, the eighth, ninth, and tenth generations are produced; two of them in August, and the last, which consists of both males and females, about the middle of September. From the females of this latter race the eggs are produced, which are intended to perpetuate the species for the following year. The parent insects deposit their eggs as near as possible to the branch buds, that the future young may be more easily supplied with nourishment (as before mentioned), and some continue to lay till the beginning of November. The eggs, at first, are green, but soon become perfectly black; they adhere to the branches by a viscuous matter that surrounds them, and remain uninjured by the frost of winter." (Phil. Trans., vol. xli, p. 182). It will be seen by the above, that the best time for destroying the aphis is while it remains in the egg state; as, if suffered to breed, it multiplies to a frightful extent. purpose, wash the stems and branches of the rose bushes, during winter, with a composition of strong tobacco water and soft soap; or, if this be thought too expensive, with water heated to a temperature of two hundred degrees; in both cases, cleaning the branches, after the composition, or hot water, has been applied with a small painter's brush. Should this precautionary measure have been neglected, care should be taken to watch for the appearance of the first brood, and, as soon as the insects are perceived, to destroy them with lime, or tobacco water, or by fumigation; taking care never to use the nearly boiling water after the buds are expanded, though it will not do the slightest injury before that period. Each succeeding brood being much more numerous than those which preceded it, is more difficult to destroy, till the summer broads, if suffered to appear, completely clothe the young shoots, so as to make them seem nearly three times their natural thickness. In this state, the best remedy is to put half a pound of the best strong tobacco into a gallon of hot water. and as soon as the infusion has become cold, to dip the young shoots into it, letting them remain a few seconds in the water, and if they are in a very bad state, going over them a second time. After this, the shoots should be carefully washed with clean water, and the insect will generally be found to be destroyed. (See Gard. Mag., vol. x., p.215). Choice plants may be freed from the aphides, by going over the whole plant with a soft brush, laying the infected shoots in the palm of one hand, and brushing off the insects with the other. Pruning is of little use, as the aphides generally attack all the young shoots of a plant at the same time. (See Encyc. of Gard., edit. 1835, p. 1076). The plants may also be syringed with water in an evening, and then dusted with powdered tobacco leaves, or refuse snuff; or they may be syringed with lime water. The prodigious fecundity of the aphis rosæ almost surpasses belief. " Reaumur has calculated, that in five generations one aphis may be the progenitor of 5,904,900,000 descendants; and in ordinary seasons, there are ten generations produced on rose bushes in the space of nine months. (See Encyc. of Gard., p. 1076).

To keep Pelargonia in cold frames or pits, for which any needful quantity of covering is provided, it is plain that no clongation of the stems could be accomplished, and that subsequent injury could not possibly accrue where there was nothing to cause it. Covered frames are consequently the most likely to ensure dormancy, and the maintenance of dormancy is the soul of winter cultivation. But it may be asked, how is this fatal foe, moisture, to be expelled, when there are no means at hand to effect this purpose! We arswer, mischievous dampness does not arise causelessly; it is not merely accidental. The outer air may be laden with moisture for weeks together, and the plants in a frame may, at the same time, be as dry as is necessary, under proper restrictions. It is by watering the plants that too great humidity is occasioned; and in the power of supplying or refusing that element, the cultivator holds perfect facilities for rendering the atmosphere almost as arid as he pleases.—

The few hints which follow on the administration of water to Pelargonia during

winter, are founded on experimental enquiries. First, never give to any plant, the soil around the roots of which is not evidently reduced to nearly a powder on the surface, owing to its dryness. Secondly, in watering, never employ a rose, but pour it through the spout of a common pot, and avoid wetting the leaves. Thirdly, apply a very small quantity, for it is dangerous to bestow too much at once, as the presence of fluid increases the influence of cold. Lastly, see that every pot is effectively drained, and that they are so arranged on a stage as to be beyond the reach of the refuse fluid from those above them. (Paxton's Mag. of Botany).

Belerium intends to publish, in our August number, an account of the Pansey, from its introduction into British gardens up to the present time, with such remarks upon the cultivation of that beautiful family, as we hope will be acceptable to our readers; and, as the most important, because the most useful part of this communication, will be a list of what he thinks are the best sorts extant, and a critique upon their relative merits, he has desired us to say, that he will be glad to communicate with any amateur upon the subject, with especial reference to the best sorts known in the neighbourhood of the communicant.—All letters to be addressed to our care for him, will be promptly forwarded.

Camellia Spofforthea is unlike any variety I am acquainted with, much like the double white in shape, but very much striped with red. The Hon, and Rev. W. Herbert, who raised it, says, it is decidedly the best striped Camellia in cultivation; and he is very good authority, as he sees every thing new that is stirring, particularly Camellias and bulbs, of which he is a great grower and breeder.—W. M.

In the article inserted last month, "On the Culture of the Chrysanthemum, by Belerium," in page 272, the 29th line should read as follows:—"Delivered to his directions, in Bristol or London, carriage free."

The bee resembles our own species in one of our worst propensities, the disposition to war; but their attention to their sovereign is equally extraordinary though of a somewhat capricious kind. In a few hours after their queen is lost, the whole hive is in a state of confusion; a singular humming is heard, and the bees are seen moving all over the surface of the combs with great rapidity. The news spreads quickly, and when the queen is restored quiet immediately; but if another queen is put upon them, they instantly discover the trick, and, surrounding her, they either suffocate or starve her to death. This happens if the false queen is introduced within a few hours after the first is lost or removed, but if twenty fours have clapsed, they will receive any queen and obey her.

The difference between the conducting powers of metal and wood may be strikingly shown by taking a smooth cylindrical tube, or still better a solid piece of metal, about 1½ inch in diameter and 8 inches long, wrapping a piece of clean writing paper round the metal, so as to be in close contact with its surface, and then holding the paper in the flame of a spirit lamp, it may be held there for a considerable time without being in the least affected; wrap a similar piece of paper round a cylindrical piece of wood of the same diameter, and hold it in the flame, it will very speedily burn. When the paper is in close contract with the metal, the heat which is applied to it in one particular part cannot accumulate there, but enters into the metal, and is equally diffused through its substance, so that the paper cannot be burned or scorched until the metal becomes very hot; but when paper is wrapt round wood, the heat that is applied in a particular part, not being able to enter the wood with facility, accumulates in a short time in sufficient quantity to burn the paper.

At the first exhibition of the London Horticultural Society for the season, which took place at the gardens on Saturday, the 16th May, the prizes were awarded as follow:—

For the large collection of Stove and Greenhouse Plants.—The gold Knightian medal, Mr. Green; the Banksian, Mrs. Lawrence. For the

small collection—The gold Banksian, Mr. Barnes.
For thirty species of Cape Heaths.—The gold Knightian, Mr. W. Barnes;
the new gold Knightian, Mr. Pamplin.—For six species of Cape Heaths.—
The new gold Banksian, Messrs. Lucombe.

For a miscellaneous collection of Fruits.—The gold Knightian, Mr. Davis.

For Pelargoniums.—The gold Banksian, Mr. Cock; the new gold Ranksian, Mr. Gains.

For Exotic Orchidacee.—The gold Knightian, Mr. Mylan; the new gold Knightian, Mr. Rollisson; the gold Banksian, Mr. Durnsford.

For a new species of Rhododendron.-The gold Banksian, Mr. Smith.

For Greenhouse Azaleas.—The gold Banksian, Mr. Falconer.

FLORAL AND HORTICULTURAL EXHIBITION .- ZOOLOGICAL GARDENS, MANCHESTER .- The first Floral and Horticultural Exhibition of the season at these gardens was held on Wednesday, the 20th of May; the flowers shown being Tulips and Pansies, and the other departments of the Exhibition including Pelargoniums, Orchideous, Stove, Greenhouse, and Herbaceous Plants, Hardy Shrubs, Fruits, Vegetables, &c. The gardens, in their good order, clear condition, and well-arranged parterres, no less than in the healthy appearance of the shrubs and trees, bear high testimony to the zeal, exertions, skill, and management of the botanical curator, Mr. Mearns. The exhibition was held in the long and spacious marquee on the terrace. A long table ranged down the centre, and there were stands for the fruit and vegetables at one end. The show of tulips was rather extensive, and a very fair one. There was a good show of very fine pansies, including many entirely new varieties, seedlings, &c. The orchideous plants were here, as they bid fair to be everywhere, the great attraction of the exhibition. There were some very fine ones from the conservatories and gardens of the Rev. J. Clowes, J. C. Harter, Esq., and other gentlemen. Altogether the show was a good one, and it is to be regretted that the day was so unpropitious.

ANSWER TO QUERY.

We beg to assure A.L. that we are anxious, as far as possible, to render the Floricultural Magazine a journal of gardening generally; and although it is our purpose to introduce, as often as objects of interest present themselves, papers on Horticulture as well as on Floriculture, it does not appear that so many feel interested in the culture of fruit and vegetables as of flowers. If it be the case that our friends suppose we make papers on the former subject less welcome than those which treat on the latter, we are glad our attention has been called to the subject; and therefore take this opportunity of repeating, what we have frequently stated before, that information bearing upon gardening, in any of the numerous and varied forms in which it presents itself, will always be acceptable; and we shall be very glad if any friend will favour us with a few papers, so that we may give one or more in each number of the present volume.—[ED.]

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. L.-JULY, 1840,

ORIGINAL COMMUNICATIONS.

REMARKS UPON THE FLORISTS' ANNUAL AND GUIDE, BY GLENNY, WITH ILLUSTRATIONS, BY WAKELING.

The limits of the review department of this Magazine, precludes the possibility of giving more than a mere outline of the contents of the "Guide," and a few passing remarks upon some of the leading characteristics of a book designed to promote the culture of florists and other flowers, by simply giving the most efficient methods of culture that are known, and a list in the several divisions. of the best flowers that are introduced to public notice up to the spring of the present year. The leading feature of the work is the plainness with which every horticultural subject is treated; and its most important characteristic, is the excellent analysis of the relative merits of the various new flowers of the day, when put into juxta-position with older ones of the same family or species. In the excellent essay upon the recent history of the Dahlia, there are some very judicious remarks upon the properties, and the essentials of a good shew flower; and to persons at all acquainted with the culture of this showy family, it will be matter of congratulation that there is a method proposed, which, if carried out, will do away with most of the uncertainty connected with the purchase of seedling Dahlias. It is to establish a graud national annual exhibition, at which all new flowers which are by their raisers considered an acquisition to our already large collections, shall be shewn in half dozens; this is just the sort of thing wanted, there will be then an opportunity to estimate the relative merits of the seedlings one

with another, and also, as there will be an exhibition for all other Dahlias in classes, to compare them with the older ones. can be accomplished, it will be the revivifying a class of flowers which many growers are beginning to feel little interest in from the tricks annually practised, in foisting new varieties upon the public under high sounding names and strong recommendations. Indeed, of about 150 new ones sent out last year, each of which was declared to be almost an essential to every dahlia grower, about twenty or thirty only merit a second year's growth, and, perhaps, not more than six will be permanently kept as shew flowers-(think of the half-guineas paid for the remaining rubbish). The exhibition is to take place at Stafford Hall; and it may be expected that no one having a good seedling will fail to send it there. On the spot the winning flowers should be named, and the price fixed; after that we shall have no "Beauties of the North" or " Lady Sondes" to encumber the "new collection."

The remarks upon the tulip are extremely valuable and to the purpose; and the bone of contention between the London and the Northern growers is nicely picked, perhaps rather too barely. The point at issue is, whether a tulip shall be considered a stage flower if the cup is fine and the bottom clean, even if the colouring is not quite regular at the edges or the middle, or whether the regularity of the pencilling shall determine its value, even if the cup is not of a fine form and the bottom stained. The question determines itself by comparing two tulips having the necessary qualities for a London and a Northern stage. I think that an unprejudiced mind would prefer the "Southern" taste; for, without fineness of form, no flower will command universal admiration, and no mere regularity or richness of colouring will fascinate, if it is not in its various parts so disposed as to be seen with effect. It will be well if a meeting of the leading florists in each great district can determine the point pleasantly and satisfactorily, and set up some variety in each class of Rose, Byblomen, and Bizarde, as a standard to calculate points of excellence from. Mr. Glenny gives " Polyphemus" as the best Bizarde, "Roi d'Siam" as the best Byblomen, and "Triomphe Royale" as the best Rose Tulip in general cultivation, and, I believe, that these flowers are highly esteemed in the north, more especially the "Siam."

The following are recommended, being those which have often obtained prizes in the Metropolis and its neighbourhood.

Bizards. Byblomens. Roses. Shakespeare or Garrick Holmes's King Triomphe Royale Strong's King Violet Rongeatre Camose Polyphemus Alexander or Biulante Eclatante Abercrombie, Sanjoe or Quarto Catalini, Poncean tres Captain White Rubens Blanc or Latendres Desiderata Claudiana Titian Carlo Dolei David Duchess of Kent Surpasse Pompe Duke of Clarence Salvator Rosa Madame Vestris or Prin-Bienfait or cess Sophia of Glou-Trafalgar Albion cester Surpasse Catafalque Siam Dutch Ponceau Charbonnier Rose Blanca Ceris a belle forme

About six or seven years since, some florists fancied that they had made a wonderful discovery in the applicatiou of night soil in the preparation of Ranunculus beds; and a great fuss was made about it, and many were the fine collections which disappeared a few years afterwards. I did not grow Ranunculuses at that time, but was rather surprised at the results stated in a popular periodical of the day; but that such a strong and rank stimulant should be used without preparation in the culture of the Ranunculus, would startle auy sober-minded grower acquainted with the Emertonian theory.* On this subject there is an excellent letter from the raiser of the celebrated Scotch seedlings, and he states that a good loamy soil upon a layer of decayed manure, and the bed well settled before planting time, is the best and most certain method of obtaining a fine bloom.

If I had room, I would give the list of Auriculas recommended, but must merely say that Streche's Alexander, Oliver's Lovely Ann, Taylor's Glory, and Page's Champion, if a grower has room but for a dozen, should be grown in triplicate. I must pass over the Polyanthus list, and the essays upon the Carnation and Pink, and several important papers on other flowers, and on various gardening subjects, just to notice very briefly what I consider to be the best piece of floricultural information yet offered to the public. It is an article upon the Rose, so copiously and yet so comprehensively arranged, that it will suit the rose fancier from the Prince to the

Isaac Emerton was a great Auricula fancier, who died a few years ago. He
approved of the most offensive and rankest animal manures, but always ameliorated by age. He was a very successful exhibitor at Shews, but often lost
his best plants from overcharging them with a stimulating soil.

peasant, a collection of any size can be selected therefrom with more certainty, and with more satisfaction than could be made from any list ever before printed. Everything is said just as it should be said, and where it should be said, and the Editor of this Magazine cannot do a greater favour to lovers of Roses, (and who of his readers is not one?) than to extract the article entire into this work, provided the author will allow it.

The work is illustrated with some very beautifully coloured plates, and is bound in green cloth; but the writer thinks that from its price a little more attention might have been paid to its exterior appearance; and, as it was calculated to be a book in its embellishments fit for the drawing-room table, it should have been bound in the style of the other annuals. The rapid sale of two large editions says enough for the manner of its reception by the public. I have omitted, in the proper place, to say that it has advertisements of most of the leading novelties of the day, of both English and Foreign florists. If it continues to be edited with spirit this annual will be very popular, and, I am sure, that its second volume is being looked for with pleasure.

ON THE BLOOMING AND CULTIVATION OF EPIPHYLLUM.

BY J. WILLIAMS.

As this is the season to provide flowers for the following year; at least with many plants, but especially with that class of Cactæa known by the name of Cereus and Epiphyllum, when properly managed, I do not know of any plant whatever that is more beautiful and more certain of blooming than Cereus Speciosissimus. I have a plant now under my care, which has at this moment upwards of two hundred and fifty blooms upon the plant, which have either just gone over, are now in bloom, or are nearly ready to burst into full flower. My mode of treating this, and most of the fine flowering kinds, is very simple. I grow them as rapidly as I can during the early part of the summer, and when they have made their shoots and finished blooming, I pot them into fresh soil, which should be rich and stiff. I use pieces of clay, manure, leaf mould, sand, brick dust, and turfy loam, none of which are

finely broken, and are put round the roots of the plant without being pressed down. This is then well watered, and the plants are set in some cool shade for a week or ten days; they are then plunged in sand out of doors, fully exposed to the sun. The roots are kept moist and cool, but not wet. They are allowed to remain here till towards autumn; they are then brought into the greenhouse and placed in the coolest end, either on shelves or stages. Here they are allowed to become very dry. About the month of April they are removed into the vinery or plant stove, as the case may be. They are watered freely, and being submitted to a very gentle temperature, which becomes gradually higher, the plants generally bloom most abundantly towards the end of May or beginning of June.

J. WILLIAMS.

SOME REMARKS BY THE EDITOR, RELATIVE TO THE GERA-NIUM AS A POPULAR FLOWER.

There is no plant or class of plants that have maintained their standing so long as the Geranium. It has long been a popular flower in the London market, and there are thousands and tens of thousands annually sold in Covent Garden, and in various other ways in London and its vicinity, by flower venders. Those who have visited the principal 'growers of Geraniums for the London market, or rather for the London season, as it is termed, will readily give credit to our remarks. There are dozens of nurserymen around the vicinity of town who scarcely cultivate anything else, but who grow Geraniums to a great extent. It is not, however, in London and its neighbourhood, where this popular flower is raised in such quantity, it is now becoming of repute amongst nurserymen in the country, and many are now turning their attention to this ornamental family. Those who grow the Geranium extensively, do not usually keep their plants more than nine or ten months, except such as are intended to be grown to a large size, so that nurserymen making a trade of this article, clear off the greater part of their stock annually, and those kinds only are grown which bloom the most freely and come earliest into flower. The newer kinds which are annually brought into notice have been

of seminal production, and those which, as new kinds, that have been the most sought after, have been introduced by Catleugh, of Sloane-street, Chelsea; Gains, of Battersea, &c.

It is worthy of remark, as showing with what rapidity the Geranium is increased, that plants which are sometimes sold at five guineas, are within twelve months, sold at five shillings, half-acrown, and even as low as eighteenpence, and a shilling.

The following are some of the leading high-priced kinds which are offered as novelties for the present season:—

	8.	l .	s.
Conservative	105	Madonna	21
Coronation	63	Premier	21
Clarissa	42	Queen Dowager	21
Effulgens, Jervoicé's	21	Rosetta	21
Erectum	63	Speculum	42
Florence	42	Splendidum	21
Joan of Arc	15	Sylph	105
Lady Douro	42	Victory	42
Matilda	63	Una	15

Besides these, there are many others, and it may be superior to those we have named; but in flowers, as in men, merit may live a long life, and die unknown, unless patronage take it by the hand and lead it into notice.

Editor.

ON THE TREATMENT OF MENITTIA CORDATA, AS A STOVE PLANT.

BY J. SMITH.

One of the most beautiful plants that I know is Menittia Cordata, when treated in the following manner. Suppose the plant small, young, and healthy, and in a pot of four or five inches in diameter, and pretty well rooted, shift it into a pot a size larger; but the pot ought by no means to be more than one size larger. Put a stake or support, of sufficient length, to which the slender or twining stems should be carefully tied. Syringe the foliage, and plunge the pot in a mild bottom heat; suppose it to be the back part of the bark bed of a pine stove, when the heat is very mild. Before the plant begins to run rapidly, it ought again to be shifted into a pot of eight or nine inches diameter. It may then be trained to some of the columns or permanent supports, and directed in any way most convenient to the arrangements of the house. When the plant is trained to the columns, which are, of course, fixed, it is desirable to attend to the plant, in order to

prevent it from suffering injury by the subsiding of the bark bed. When this takes place, the pot continues to settle with the bed, and the plant, in such cases, not unfrequently becomes what is termed "hanged," or drawn out of the pot, and broken at the neck.

By treating this plant in the manner described, I have seldom seen anything more ornamental. I have had it continue in one mass of scarlet tub flowers for months together.

J. SMITH.

ON A SELECTION OF PLANTS SUITABLE FOR GROWING IN VINERIES, AND THE MODE OF TREATING THEM. BY G. F. SANDERSON, ESQ.

It is still a desideratum in gardening to find out some means of rendering the cultivation of Vines and ornamental flowering Plants a matter of certainty and success in the same house, and to adapt the treatment so as to be applicable and suitable to both. The following remarks are offered, with the view of supplying some information towards this inquiry. The plants which I have for some years cultivated in my vinery, and, as I think, with no small success, are the following. Gloxinias, all the kinds, except hirsuta; Gesnerias, many varieties; Amaryllis, a great many; Sinengias, most of the kinds; Hedychiums, any of the species; Salvia patens, and indeed any plant having any fleshy roots and bulbs, and whose foliage and stems are annually renewed, and require several months of repose or rest. Those I have named are such as I have myself grown to good perfection, without being, in the slightest degree, detrimental to the Vines. They are repotted at the time the vinery is commenced, generally about the middle of March, and they are gradually brought forward as the Vines. advance; and towards the season when the latter begin to ripen. the plants are either in full bloom, and may either be allowed to remain, or may be taken out and placed in the windows and balconies of the dwelling-house. When the blooming season is over, they are stationed in some place sheltered from heavy rains, but fully exposed to the open air and night dews. About the first week in September, they are taken into some back shade or shelf in the vinery, and kept dry and from frost, till the following spring.

With plants of this kind, I have never found any difficulty in growing them to full perfection. During the time they are in the vinery, they are kept as near the glass as possible. I have always kept them on the flue in front of the house.

It is a very current complaint that Grapes and ornamental Plants cannot be grown in the same house, without injuring either one or the other; and so far this opinion is quite correct, when a miscellaneous collection, instead of a selection, is attempted to be grown.

G. F. Sanderson, Esq.

Bell Cottage, Islington.

ON THE GRAFTING OF CEREUS FLAGELLIFORMIS ON PERISKIA ACULIATA.

BY SUCCULENTUS.

It is not generally known, but what I have practised for some years I am now about to describe, and have found my practice to be attended with far more success than I had myself thought it possible. The mode of grafting is one of those means by which new habits, new forms, new properties,-indeed a complete change, is effected in the general aspect of many kinds of plants submitted to the operation. My present purpose, however, is to speak more especially of the Cereus Flagelliformis when grafted on Periskia Aculiata. I have worked them at heights varying from one to nine feet high. The Cereus being a rapid growing plant when kept in a high temperature, such as that of an ordinary stove ranging from 60 to 70 degrees, they strike root readily in silver sand in a little bottom heat, and will grow six or eight feet in the course of one Summer. If properly treated, they generally attain the thickness of a good strong quill, at the height of five or six feet, and may be worked or grafted. With the Cereus I have generally used pieces from six to nine inches long. The mode of grafting which I have adopted has been, to form the part of the stock on which the graft is to be placed into the shape of a wedge, making a slit in the centre of the end of the graft, and placing it on the end of this wedge-shaped stock. It is then tied very slightly, just sufficient to keep it steady on the stock. The union is usually effected in the course of a month, and sometimes less.

Grafted plants are very often formal and ungraceful, but the opposite is the case with the one in question. Nothing can be

more graceful in habit than this plant when grafted on the slender stem of the Periskea, at the height or five, six, or more feet. I have plants that were grafted about four years ago, and have now pendent whip-like shoots, four feet in length, and which flower annually in the greatest profusion.

The stock requires a very small pot. I have some with stems upwards of six feet in height, with the grafted pendent shoot more than four feet long. The pots in which these are growing, are not more than eight inches in diameter.

SUCCULENTUS.

ON THE CULTIVATION OF GREEN-HOUSE PLANTS.

BY S.

Boronia. - This very handsome genus of plants may be cultivated as follows: - In potting use nice, free, sandy peat, not over-full of fibres; take care to drain well, and always avoid over shifting: water at all times with caution, but more particularly in winter. They require to be kept in the green-house during summer, must be shaded from the powerful rays of the sun, and never crowded among other plants, as is too frequently the case. Air and light are so essential to these plants, that they never thrive well if partially supplied with either. Cuttings require active attention or they will not succeed; they should be cut clean below a joint, and planted in pots of sand, a glass placed over them, and plunged in sand in the propagating-house, and be careful they have no bottom heat, as it is generally destructive to them. Air now and then should be admitted by removing the glass for the excess of vapour, &c. An excess of moisture, if not checked, will severely injure, if not totally kill them; and the glass should be wiped with a dry cloth every morning. Young plants may be also obtained from layers, if properly managed, which is nothing more than care and skill in the operation. Boronia, serrulata, pinnata crenulata, &c., are very excellent.

Muraltia.—This genus, which formerly (though erroneously) belonged to the genus Polygala, is a very interesting plant at all seasons, but when in flower doubly so, and it well deserves a

place in every collection of Cape plants. They thrive in the green-house in sandy peat, mixed with a small portion of open loam; they do much better in this than in peat only, as they grow stronger, and the flowers are much more abundant, larger and finer. It is at all times necessary to water with caution, and never to neglect fresh potting the moment the roots show signs of matting. Cuttings of the tops of the young branches strike freely by simply preparing and planting them in sand, and placing them in the propagating-house, and carefully attending to them, as recommended for Boronias. The following are superb sorts:—muraltia, heisteria, spinosa, stipulacea, virgata, ciliaris, linophylla, diffusa, juniperifolia, ericifolia, trinerva, squarrosa.

Polygala.-I have again to notice a truly splendid family of plants, and one that deserves the most unlimited cultivation. Few plants exceed in beauty a well-grown and well-flowered specimen of a Polygala speciosa, or grandiflora, and few plants are better adapted for planting out on the border of a Conservatory than these are. Indeed it appears to be the place most suited for them for there they have room for their roots to ramify, and their branches to flourish. The soil most suited for them while young is sandy peat; but when they become well established, they do much better in peat and loam, the former well broken with the spade, but not sifted. In potting drain well, and use a goodsized pot, and always change the pots as soon as the roots show signs of matting, if it is intended to keep them in pots in the green-house. When the plants become well established, place them in a large sized pot, in which they will grow and flower freely; on the contrary, if kept in small pots, the plants will appear sickly, and never flower to perfection. If the plants become straggling prune them back, as few plants bear the knife better than these will. P. latifolia superba, mytrifolia, and others will strike freely in sand, placed in the propagating-house. P. speciosa may also be propagated in that manner, but a much better way I shall now proceed to describe. About the middle of April slip off young shoots, about three inches long, and pot them in thumb pots, filled with very sandy peat, one in each pot; then give them a gentle watering, and place them in the front of the green-house between other large pots, where they can have plenty of air and light, but no sun. Water when they require it

and five out of six will grow. This, though a simple manner, I can vouch for being a very excellent one, and one that requires little trouble. P grandiflora may be struck by cuttings in sand, like latifolia, though by no means freely. The best mode of increasing it is by layers; lay them in May in the usual manner, by tonguing, or twisting the roots a little; they will be fit to separate in about eight or ten weeks. Polygala grandiflora, latifolia superba, myrtifolia, speciosa, cordifolia, hastata, and oppositifolia, are very excellent plants.

Gnidia.—This pretty tribe of plants is a native of the Cape, and will grow freely with ordinary care. Pot them in equal parts of peat and loam, well mixed; place them in the green-house, in a light airy situation, and they will grow and flower freely. Some of the robust growing kinds may be turned out of doors during summer, though they will do better in the house if there is room for them there. Care must, however, be taken to shade them from the powerful rays of the sun. Most of the species will strike root freely in sand, placed in a cool frame, or in the propagating-house; but on no account must they be placed in heat. Gnidia radiata is the most difficult to increase; cuttings in sand, and covered with a glass, if carefully managed, will root with difficulty. Gnidia simplex, denrudata, G. radiata, aurea, sericea, pinifolia, and capitata, are pretty plants.

(To be continued.)

ON THE TREATMENT OF THE PINE APPLE, WITH ESPECIAL REFERENCE TO THE STRONGER GROWING KINDS.

BY T. M.

Having had occasion in my remarks on the Pine Apple to mention a dissimilarity of treatment required by some kinds, as the Black Jamaica, Antiguas, Providence, and others usually termed Black Pines, I will, with your permission, proceed to notice briefly some of the peculiarities which constitutes this difference.

The kinds above-mentioned, are chiefly strong and vigorous growers, often attaining six feet in height, and proportionably large before they produce fruit. To provide structure suited to their necessities, is a consideration of importance, in which the difference first presents itself, as they require a greater depth of

pit in order to obtain the requisite degree of bottom heat, and also a greater distance between the surface of the pit and the roof, that the leaves may not be liable to sustain injury or inconvenience. This distinction refers to the period when they are approaching a fruit-bearing condition.

They are also more tardy in producing fruit than those prolific varieties to which my former papers more particularly referred, and have consequently a greater length of time to remain in pots; this renders it needful that particular attention should be paid at the times of re-potting, to remove all fibres, which, on becoming old, are by any means approximating to a state of decay, and to retain only those which are young, vigorous, and healthy. If this is properly attended to, abundance of healthy roots and of vigour in the plant will result, without having recourse to a complete abscission, which at any stage of growth, I am averse to, except in cases where the roots may be diseased or injured, or the plants may happen to become sickly and unthriving. In such cases I would recommend the plants to be taken up and the whole of the roots cut away, and then treated as newly planted suckers. In all other cases I repeat, that I think it not only desirable, but necessary, to remove a portion of the old roots and balls of earth, in order to promote and encourage as much as human effort can, the continual production of new and vigorous fibres. To repot Pine plants with the balls of earth entire, and without pruning the roots as above noticed, would be an error as much to be avoided as that of removing a single healthy root from an healthy plant.

In the use of water a distinction presents itself, our subjects requiring a less quantity in proportion to their apparent capacity than the other class. An higher temperature, both at the roots and in the atmosphere is also requisite, but caution is needful lest an extreme should be adopted. The preservation of humidity in the internal arrangements of the black Pine stove, and the admission of fresh air in conjunction with the slight increase of temperature spoken of, are all that remain for me to particularize as differences in their cultivation; and even these are scarcely so, it being more in the manner of applying and adapting these constituents of vegetable life, than from any material change of proportion in the elements themselves, that the dissimilarity of treatment consists.

ANSWER TO QUERY, RELATIVE TO DESTROYING MOSS ON LAWNS, INSERTED IN THE APRIL NUMBER.

BY J. W. THACKRAY.

If you deem any additional reply to your querist necessary, I beg to offer the following, for his information and your approval. I have the management of the Lawn, at Bawtry Hall, (the seat of Chas. Ramsden, Esq.,) an old pasture, completely covered with moss, so much so, that in some parts it grew little or no grass : and that little of no value. As an experiment for a future dressing, I apply lime in some parts, in others good soil, in others decomposed manure, and others soot, all of which have a tendency to destroy the obnoxious intruder, but none so effectually as soot; this is not only the best, it is also the least trouble and expense. Soot completely kills every particle of moss, at the same time supplies its place with beautiful herbage of the most luxuriant growth; any stranger passing over the Lawn, would observe (as far as the eye would allow) at first sight, the spot where it had been applied, the colour being so dark, the quality so much better, and eaten so much shorter than the other part of the Lawn. The only trouble is, to be sown with the hand out of a hopper, in the months of February or March, at the rate of forty-five to fifty bushels per acre, at sixpence per bushel, will be the whole of the expense.

J. W. THACKRAY.

London, April 24, 1840.

ANSWER TO "TIRO," WHO WISHES TO KNOW HOW CEDRUS DEODORA MAY BE RAISED FROM CUTTINGS.

BY JOHN M'EVOY.

The last week in June, the specimens planted in the arboreum here, were undergoing a side pruning (by the bye, many gardeners are not aware of the great advantages to be derived from frequent and judicious pruning of Cedrus, Cupressus, Juniperus, &c., but of this, perhaps, at another time). We selected a quantity of C. deodora, Abies douglasii, and a very handsome species of Juniperus, said to be indigenous to Madeira, all of which I prepared by slipping the short lateral shoots from the branches; to each cutting I left a heel of the old wood, cutting it smooth, In a low pit with

a north aspect, we put very sandy peat, with a small portion of loam, four inches deep, which we filled with the three mentioned sorts, two inches from row to row, and one and a half inch from cutting to cutting in the line, gave a good watering with a rosed pot, and allowed the cuttings to get quite dry before putting on the hand glass. The pit was shaded in sunshine, there was a gentle heat in the pit under the cuttings, and I found on examination several of each sort well rooted, the rest calloused, and some emitting roots. If Tiro intends striking any quantity, I would advise him to build a slight hotbed, with a north aspect. Early in spring lay slates over the surface of the dung, and cover with eight or ten inches of saw dust, in which can be plunged any number of pans filled with cuttings, but the bottom heat must be very gentle; the frame will require shading in sunshine. If small hand glasses can be put over each pan, a more uniform temperature will be obtained, which is of much importance in the propagation of this tribe of plants.

John M'Evoy.

Leweston Gardens, Sherborne, Dorset, Nov. 16th, 1839.

ON THE CULTURE OF THE CAMELLIA.

Of all the beautiful exotics that are cultivated in the greenhouse or conservatory, there are none, I think, so beautiful as the Camellia, it is no matter what season of the year we look upon it, there is always something to attract our attention. If we view it in the summer months, when it is considered in its worst state, we cannot but admire its elegant form, and the glossy hue of its dark-green foliage; and in the depth of winter, when nature's face is covered with snow, when most other things are at rest, on entering the greenhouse or conservatory, we behold the Camellia in all its glory—we are charmed with the numbers of beautiful showy flowers of various sizes and various colours, white, buff, red, striped, spotted, and shaded, all regularly distributed throughout the whole plants, which gives them such a rich and charming appearance, that cannot fail in drawing forth the admiration of every beholder.

The cultivation of the Camellia is simple and easy; the chief point, I consider, is proper soil for them to grow in. Once obtain that, and I have no doubt but they will grow well in any common greenhouse, without any more attention than is paid to the rest of Perhaps some of your readers will say which is a proper soil, for the most eminent and successful cultivators of the Camellia differ in the soils that they use: one grows in loam, another in peat, a third in loam and peat mixed, some will use sand, rotten manure, and rotten leaves, others will not, and amongst such a variety of soils and difference of opinion, how are we to know which is the best. To such I would answer, the strongest and best grown plants that have come under my notice were grown in loam alone; I would, therefore, recommend a fine yellow sandy loam, of as close a texture as possible, so that when it is watered it has the appearance of clay, but at the same time is quite friable, and not subject to bake hard in the sun. I have always found when plants were potted in such soil, that they grew much stronger than they did when a mixture of any kind was used along with it; although I consider that they do not bloom so freely as when a mixture of peat is used. Peat, I consider, has a tendency to check the luxuriant growth of the plant, which, of course, will make them bloom more freely. I have seen a few instances of plants being potted in all peat, in two or three years nearly blooming themselves to death. I would only recommend peat when the plants are growing very luxuriantly, and then not more than one third part; as I have always found that quite sufficient to check that luxuriancy, and make them make as much bloom as the plant ought to bear: for I have frequently observed, when a plant has been very full of flower one year, it has been very weakly for a year or two afterwards. I would recommend, when a plant is very full of buds, to thin them to single buds, and not allow three or four to remain, as is frequently the case; those that are left will make finer blooms, and the plant will still remain in good health. If the soil be very poor, about one-eighth part of half rotten leaves rubbed through a wire riddle, may be used with advantage. I would not recommend manure at all, as I never saw it used to advantage, but if anything, to the contrary. There can be no exact time specified for potting the Camellia, as it entirely depends whether the plants have been forced into bloom by artificial means, or whether they have been allowed to come naturally by themselves, and some kinds have a tendency to bloom much

earlier than others; but as soon as they have done flowering, if it be after the beginning of February, the sooner they are potted and better, as they will begin to grow immediately, and the potting, if possible, ought to be done before that takes place. The soil must not, on any account, be riddled, but broken up with a spade, and used in a rough lumpy state : as it prevents its baking in the sun, secures a free circulation for the water, and prevents the roots from matting together, which are points that ought not to be overlooked, as they are essentially necessary and conducive to the future health of the plants. In potting, great care must be taken not to disturb the roots, at least as little as possible; turn the plant out of the pot, and remove any loose soil with the fingers, or an iron skewer: with the latter, any old soil that has become sad, may be carefully picked out from the roots, and replaced with fresh. The roots must not, on any account, be pruned, unless they are dead, then all such must be removed, and the remainder washed with tepid water with a syringe; then take a little dry soil and dust amongst the roots, which, on account of their being wet, will adhere to them, and will be of great service in encouraging the growth of young roots; then take either a new, or clean washed pot, a little larger than the ball, fill it at least one-fourth the depth of the pot with broken pots, then cover them with a little moss or very turfy peat, to prevent the soil from being washed down amongst the drainage; then put in a little fresh soil, and place the ball of the plant in the centre, and fill all round the sides until the pot is full. Care must be taken to fill well between the ball and the sides of the pot, and without the aid (of what is termed) a potting stick, if possible : for, if they are not used with great care, much injury might be done to the roots, and the soil might be pressed so hard as to cause it to bake in the sun, and the roots would then be unable to penetrate it. After the pot is full, water sufficiently to wet the fresh soil completely through to settle it amongst the roots. Prune off any straggling or dead shoots, as no plant bears the knife better than the Camellia; it is no matter what part you cut to or how old the plant is, there is sure to be plenty of wood buds make their appearance, and soon plenty of young shoots. Then remove them to the place destined for their reception; if a little heat could be given, from 55 to 60 degrees, during the growing season, it would

be of great advantage, as it will make them grow much stronger and set their flower-buds much better than they would otherwise do with the temperature of the greenhouse or conservatory. Shade them at all times from March to September when the sun shines, otherwise they will loose their glossy green appearance, the leaves will either be burnt black or have a yellow sickly appearance, and in the end will drop off altogether, Sprinkle over the tops with tepid water once a day, and give a liberal supply to the roots during the growing season; but, at other times, the Camellia appears to be impatient of water, and requires keeping rather dry. They should not remain longer in heat than such times as they have set their flower-buds, but be removed to a shady part of the greenhouse, and kept quite cool until November. If they are then placed in a little heat, it will make them bloom earlier and expand their flowers much better than they would otherwise do; but they must not remain in heat during the flowering season, otherwise the flowers will drop much sooner than they would do if kept cool. There are few of our exotics so susceptible of injury by drought as the Camellia whilst in a growing state, which ought to be guarded against as much as possible. If ever the ball gets so dry as to prevent the water from entering it, take an iron piercer and pierce the ball full of holes to give facility for the water to enter every part of the earth. The propagation of the Camellia is attended with a little more trouble than a many of our exotics, as the double ones require grafting upon stocks of the single variety. Stocks of the single red are easily obtained from cuttings taken off as soon as the wood of the present year is ripe, remove no more leaves than is necessary to admit of them being firmly placed in white sand, from 30 to 50 cuttings in each pot, according to the size of them; they must be placed in a shady part of the greenhouse for about a month, and then removed into an hotbed, which will make them grow much stronger than they would do if left in the greenhouse. As soon as they are rooted, they may be potted into small pots, amongst such soil as recommended for the old plants; then place them again in the hotbed, and shade them at all times when the sun shines; plants treated in the above manner, will be ready for working from eighteen months to two years of age.

In-arching, grafting, and budding, are all resorted to in propa-

gating the Camellia. The former being the most certain, is the most frequently practised, which is done by bringing the stock in contact with the plant wanted to propagate from, and making a longitudinal cut about two inches long, on one side of the scion, and a similar one in the stock, and tieing them close together with ligatures of bass-matting or cotton wick. They must remain in that state for six or eight weeks, when they may be unloosed, and if they are united, the scion may be cut from the parent plant; after the plant has done growing, the head of the stock may be cut off, and then treat them as the other plants. The above method may be performed almost any time of the year; but if independent grafting be resorted to, it must be performed in the spring, before the plants begin to grow. The method called side or whip grafting, is generally practised, -if any tongue is made, it must be as small as possible, but they make a better joint without it, and it is of no further use than holding the scion in its place until it be tied. In both this and the above method, care must be taken not to cut deep in neither scion nor stock. Budding must likewise be performed before the plants begin to grow: it is the most simple method of the three, as it is done by merely cutting a bud from the last year's wood, with the leaf attached to it, cutting about an inch below the bud, and continue it an inch above, then make a similar cut in the stock, and tie the bud with the wood in it into the place; both these and the grafted plants should be removed into a pit or hotbed, and kept there until they have done growing, then the stocks may be cut down to the parts where they are Clay or moss is frequently used in grafting and inarching, but they grow equally as well without them, so there is no necessity to use them.

The Camellia is not so subject to be attacked by insects as most other plants, though they are sometimes infected with the white scale; when that is the case, they must be carefully picked off with a small pointed knife, otherwise they will destroy all the young buds, and make the plant have an unhealthy appearance. The green fly will sometimes attack them, which may easily be removed by fumigating with tobacco, and washing with a syringe.

If you think the above remarks worthy of insertion in your valuable Magazine, they are at your disposal. ROBERT REA,

Cottingham, near Hull, 15th June, 1840.

,

.

. •

١.



I bervena amana & Ixio grandeflora

REFERENCE TO PLATE LII.

VERBENA AMCENA. (Fig. 1.) Pleasing Vervain.

NAT. ORD. VERBENACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This is distinct as a variety, and, therefore, desirable as an ornamental plant, especially for turning out into the open borders during summer. Its large heads of purple flowers, and deeply cut foliage, with a somewhat upright habit, distinguish it from any previous variety. Like all the other varieties of the genus, it grows freely, blooms freely, and increases by cuttings of the young shoots, in a gentle bottom heat. We have for some time grown it. It has bloomed freely with us, and we believe it will be found an acquisition to

this ornamental genus.

With reference to this plant, Mr. Paxton, in his Magazine, has the following remarks: -- " Of its introduction to England we have no very authentic information; we saw it first in the garden of the Horticultural Society, and from some plants which was obtained thence by Mr. Edmonds, gardener to his Grace the Duke of Devonshire, at Chiswick, our figure was taken, in the decline of last autumn. We have every reason to think it a native of Mexico, and it is now in several of the London Nurseries. It is fully as hardy as Verbena Tenerioides, or other species, simply requiring a place in a protected frame during winter, and flourishing in the open border through the summer months. On account of its partially trailing disposition, it is well adapted for planting in beds; but the luxuriance of its habits renders the number of flower spikes it produces rather scanty, compared with the dwarfer kinds. To improve this character, it is desirable to cut off the extremity of the shoots, at an early period of the season, as the plants will be induced to emit more lateral shoots, from each of which flowers may be expected." "One of the principal circumstances for which this plant will be prized, is the opportunity it will afford for uniting the rich colours of the species which have their flowers arranged in flat heads, with the lengthy spiccate disposition of the blossoms, by which it is peculiarly characterized. This must be effected by cross impregnation, and is an object worthy of the culturist's assiduous attention,"

IXIA GRANDIFLORA. (Fig. 2.) Large flowered Ixia.

NAT. ORD. IRIDEÆ. CLASS INANDRIA MONOGYNIA.

Of the beauty of the genus Ixia, it is not necessary for us to say anything. It consists of species of which all are ornamental, and many of them exceedingly beautiful: this applies with especial effect to the one which we have figured. The flower was kindly sent us from Mr. Tillery, gardener to his Grace the Duke of Portland, at Welbeck, in Nottinghamshire. The whole of this extensive genus are of remarkably easy cultivation. The simplest mode of treating them is to plant them out in a cold frame, where they can be protected from frost in winter and excessive rains, during their dormant season. In this way they may be grown to great perfection, and are unsurpassed in beauty by any genus of plants that we know. When cultivated in pots, they merely require to be kept dry during winter, or that period of the year when they are in a dormant state; and at the proper season when growing vigorously, to be freely supplied with water, being at the same time submitted to the temperature of a warm greenhouse or cool store.

TILLERY'S CRITERION PANSEY. (Fig. 3.)

Several blooms of this variety were sent us by the raiser, Mr. Tillery, gardener to his Grace the Duke of Portland. In colour it is the nearest approach to black of any that we happen to know, and certainly one of the largest flowers we have ever seen. The petal is also firm and good.

As compared with figures of those pansies which we are accustomed to see,

ours will appear to great disadvantage. We, therefore, think it right, as it is but justice to this plant, and its raiser to mention, that the artist who made our drawing has given a faithful representation of what the flower was when placed before him, and its defects, considered with reference to the eye of a florist, are as minutely copied and correctly pourtrayed, as any property which the flower possesses.

We hope, through the kindness of a friend, to give some interesting infor-

mation on this showy family.

NOTICES OF NEW PLANTS.

FUCHSIA FULGENS, The Glowing Fuchsia.

Bot. Mag.

NAT. ORD. ONAGRARIEÆ. CLASS OCTANDRIA MONOGYNIA.

A plant now become comparatively common in our gardens, the beauty of its flowers is greatly deteriorated by the coarseness of its foilage. It appears, however, to be the medium through which many hybrid varieties have been raised, several of which will, doubtless, prove valuable additions to the many varieties of this beautiful tribe already in cultivation.

MYANTHUS SPINOSUS, Spine bearing Fly Wort.

Bot. Mag.

NAT. ORD. ORCHIDE E. CLASS GYNANDRIA MONANDRIA.

This is one of the very few Orchides which rewarded Mr. Gardener's researches in the interior of Brazil. It is a new and certainly most beautiful species.

STENOMESSON LATIFOLIUM, Wide-leaved Stenomesson.

Bot. Mag.

NAT. ORD. AMARYLLIDACEÆ. CLASS HEXANDRIA MONOGYNIA.

A new species from Lima, to the Rev. W. Herbert, by whom the following hints on the cultivation of the genus are given. "The plants of this genus like a pretty strong alluvial soil, with manure that is perfectly rotten, being naturally inmates of rich pastures and meadows, their leaves are produced at the first accession of moisture after rest and drought, and are impatient of sunshine, from which they should be screened where it is ardent. After their decay the pot should be left dry, and the flower scape will rise while it is yet unwatered. They might be cultivated with us in any situation where their leaves were protected from snails and from the scorching sun, and where the soil could be screened from rain during the winter by some covering and kept perfectly dry."

LÆLIA ANCEPS, Five-edged Lalia.

Bot. Mag.

NAT. ORD. ORCHIDEÆ, CLASS GYNANDRIA MONANDRIA.

From Mexico, affording a constant succession of beautiful purplish rosecoloured blossoms during the winter. This is one of the new species which, when their cultivation is better understood, will, undoubtedly, prove to be greenhouse plants; and by being thus placed within the reach of amateurs of limited means, will, if possible, become greater favourites than their more tender brethren, which are at present almost entirely enjoyed by the wealthier classes, from the necessary expense attending their cultivation.

MACROPODIUM NIVALE, Siberian Macropodium.

Bot. Mag.

NAT. ORD. CRUCIFEREM. CLASS TETRADYNAMIA SILIQUOSA.

Of no particular beauty, and of more interest to the Botanist than the Florist.

ONCIDIUM HUNTIANUM, Mr. Hunt's Oncidium.

Bot. Mag.

NAT. ORD. ORCHIDER. CLASS GYNANDRIA MONANDRIA.

A new species from the inexhaustible resources of Brazil, with flowers similar to O. Carthaginense, but smaller and more beautifully marked,

PORTULACA THELLUSONII, Mr. Thelluson's Purslane. | Bot. Reg

A splendid tender annual, growing about a foot high, and producing abundance of large scarlet blossoms, with a yellow eye, the centre after petals being beautifully marked with purple. It succeeds well in a mixture of old lime rubbish, and well rotted dung or leaf mould, and should be kept in a situation fully exposed to the sun, but sheltered from the wind and rain.

SPREKELIA CYBISTER, v BREVIS, The tumbler Sprehelia shorter-flowered variety. [Bot. Reg.

NAT. ORD. AMARYLLIDACE E. CLASS HEXANDRIA MONOGYNIA.

Allied to Hippeastrum, having purple and red flowers of no particular beauty.

TRADISCANTIA IRIDESCENS, Iridescent Tradiscantia.

Bot. Reg.

NAT. ORD. COMMELINACEÆ. CLASS HEXANDRIA MONOGYNIA.

A half hardy perennial, growing in any rich soil, and flowering in July and August; its flowers are very ephemeral, but the long succession of them and their iridescent appearance, render it a desirable plant. It may be increased freely by seeds, and the roots, which are tuberous, may be preserved during the winter in dry sand.

EPIDENDRUM VITELLINUM, Yolk of Egg Epidendrum. [Bot. Reg.

Superb species from Mexico, producing large orange-coloured flowers.

MORINA LONGIFOLIA, Long-leaved Morina.

[Bot. Reg.

NAT. ORD. DIPSACEÆ § MORINÆ. CLASS DIANDRIA MONOGENIA.

An exceedingly handsome and nearly hardy perennial, from the North of India, growing from two to three feet high, and flowering from July till late in the Autumm. It is increased freely by seeds, and should be planted in a strong dry soil, in a high situation, but must be protected during winter by a hand glass.

MILTONIA SPECTABILIS, Showy Miltonia.

[Parton's Mag.

NAT. ORD. ORCHIDACE .. CLASS GYNANDRIA MONANDRIA.

Introduced from Brazil by Messrs. Loddiges, and certainly a most beantiful a species as Mr. P. Observes. "It always exhibits a somewhat stunted aspect, the pseudo bulbs and leaves presenting a yellowish tinge, wholly different from the luxuriant greenness of most similar plants. This apparent sickliness is by no means displeasing, it is not of that morbid kind which indicates that the plant is severely suffering from improper treatment, but has a golden tint, too obviously natural to be otherwise than attractive. What, however, is wanting in the general garb of the plant is fully supplied in the splendour of its flowers; the delicacy of the sepals and petals is in itself interesting, and when so richly relieved by the extraordinary size and bright purple and yellow of the lip, it becomes additionally engaging."

BOUVARDIA ANGUSTIFOLIA, Narrow-leaved Bouvardia. [Pax. Mag. NAT. ORD. RUBIACEÆ. CLASS PENTANDRIA MONOGYNIA.

This, like Bulphylla (from which it is not far removed) is quite an old species, but exceedingly scarce in collections. Its flowers are of a slightly paler colour than B. triphylla, with a pinkish hue in the interior of the corolia segments, and much narrower foliage. It grows, moreover, somewhat taller, and the leaves do not appear so liable to be disfigured by disease.

AGANISIA PULCHELLA, Pretty Aganisia.

Bot. Reg.

NAT. ORD. ORCHIDEE. CLASS GYNANDRIA MONANDRIA.

A pretty little plant, with delicate white and yellow flowers. It has flowered in the collection of Messrs. Loddiges, by whom it was imported from

ECHITES SUBERICTA, Suberict Echites.

Paxton's Mag.

NAT. ORD. APOCYNACEÆ. CLASS PENTANDRIA MONOGYNIA.

A stove climbing plant, introduced in 1759, but is rarely met with. It produces a profusion of large bright yellow flowers, which is a great recommendation; but it is highly poisonous, and any operation about it should be conducted with care.

HIBISCUS MULTIFIDUS, Many-parted leaved Hibiscus. [Pax. Mag. NAT. ORD. MALVACEÆ CLASS MONADELPHIA FOLYANDRIA.

A most lovely species, with large light azure blossoms, delicately tinged with pink, and a lively crimson centre, which is prettily contrasted with the yellow and brown stamens. It is a native of the Swan River Colony, and was raised by Messrs. Henderson, from seeds received from Captain Mangles, in 1837, and bloomed with them for the first time in August, 1839.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

CORYANTHES SPECIOSA, VAR. ALBA.

A pale, indeed almost white variety, which has lately flowered in the collection of Thomas Brocklehurst, Esq., of the Pince, near Macclesfield.

POLEMONUM CÆRULEUM, VAR. GRANDIFLORUM.

A beautiful variety raised in the garden of the Horticultural Society, from seed received from India.

THALIICTRUM CULTRATUM.

A hardy herbaceous plant, of no beauty, from the Himalayas.

PANACETUM LONGIFOLIUM.

A weedy plant, from the Himalayas.

POLYSTACHYA BRAGTEOSA.

A drooping flowered species, with orange coloured flowers, imported from Sierra Leone, by Messrs. Loddiges.

MISCELLANIES.

A gentleman in the neighbourhood of Aberdeen, in whose garden the caterpillar was beginning to make its ravages, has got rid of those destructive insects by the following simple expedient. He took the advantage of a rainy morning, when the leaves were wet, to sprinkle the bushes, especially the young shoots and the under part of the bushes, with fine sand. The effect of this was, that these insects entangled with the sand, which adhered to them, dropped off, seemingly in great agony, and there has not since been the least appearance of their coming again. If the weather should be dry, the bushes should be well sprinkled with a watering pot. To prevent the insect from returning, a ring of earth is formed round the ball or trunk of

the tree; and, from the hour that this operation is performed, the insects, even in the remotest parts of the tree, will begin to fall, and the tree will, in a short time, be freed from the destructive incumbrance. It is true that the insect will afterwards attempt to renew its depredations; but as soon as it arrives at the ring of earth, which should be permitted to remain, it will hasten down the trunk with much more rapidity than it attempted the ascent.—Copied from a private memorandum by permission of a friend.

The following extract is taken from a letter lately received from a dear friend who has recently gone to reside in China:—

"I have recently seen many houses here, all of which are adorned with plants, generally placed upon walls and trellises, so as to give a beautiful effect to the eye. Many of the trees here I saw growing less luxuriantly in the conservatory at Sheffield (Botanic Garden); all have a strikingly foreign appearance, the bending bamboo. I saw in one garden, with the delicate Acacia, various kinds of the dark-leaved fig (a species of Cactem) climbing the walls like snakes; while the more plebian potatoes, cabbages, artichokes, and peas, keep their proper places on more humble and common ground. I must mention the effect of seeing one plant which I happened to pass, on the walls of a terrace overlooking the main part of Macao. It was one I had seen in the hothouse, I think a Cactus, with a prickly stem and bright scarlet flowers. I was in a moment carried in imagination to the happy visit which I spent, and sincerely wish I could repay the kindness we experienced by imparting something of the pleasure I felt on looking round on this oriental scene. When we first saw and subsequently set our foot upon the earth at Angier, I was almost overpowered by the sight and odours of such rich verdure. It was almost one mass of living green. The lofty palm tree, the cocoa nut, the Banana and plantain clothed the hills to the very summit. In gardens we saw many leguminous trees, rows of chesnuts bearing flowers and fruit at once. There were the field of rice of fresh and lovely green; large aloes, pine apples, gourds, and in rich luxuriance the arum with its immense leaves. I saw the tree with roots pending from the branches, which I imagined to be the Banyan," affording a shade for the inhabitants. The gardens were irrigated by small streams of water; in some I saw gorgeous crimson flowers, with many other kinds unknown to me. We have here excellent potatoes, cabbages, turnips, or rather large white radishes, carrots, onions, and peas, which are just coming into bearing (Jan. 7th). I see scarcely any English flowers but roses and geraniums. There are many grasses with prickly leaves like the aloe, and growing in that form. These we saw also at Angier, with a flower like an immense pink tulip, having no calyx, and very odoriferous-(Probably a Magnolia.-ED.) I make these observations, supposing you may feel interested with them. I shall take notice of the vegetation in general. None but those who see can imagine how different the whole aspect of nature is, when so devoid of those trees, plants, &c. which we have been accustomed to look upon."

Through the medium of the same friend, we hope to introduce some of the floral novelties of this interesting country.

[* Several species of Ficus possess in a greater or less degree the habit alluded to. The Ficus elastica has it to a certain extent. Some species cover acres of ground by throwing out roots from the branches as they extend.—ED.]

Root Grafting.—"I take up the roots intended to be used for this purpose in November, and, having put them deep in the ground, care being taken that they do not germinate, I leave them till the moment I wish to make use of them; and when that time comes I choose some healthy roots, that is, those without any defects, and about the size of a quill or the little finger. I then cut them of the length of from 3 in. to 5 in. and make a vertical cut, and proceed as in split-grafting. I then plant them in pots of about three inches in diameter. As soon as they are planted, I cover them with a frame of glass, and put them in frames or in the pine stove; and as

soon as I see them beginning to grow I give them air by degrees, and in a few days I take off the glass entirely and allow them to enjoy the rays of the sun, which should also be done from the first day of grafting. By this process I have been enabled to graft from January to the end of July; and in summer I only use the roots of the rose that I think will not injure the plant which must furnish roots to be again grafted the following year. The roots of the Chinese rose and those of B. multiflora are to be preferred; because, from what I have observed, they do not put out buds below the grafting, as is the case with Rosa canina, &c. and by this means in two months plants will be formed and produce flowers, particularly the variety of Rosa odoratissima. This kind of grafting is, in my spinion, preferable to the other, because the latter is not always successful, and requires a great deal of care, and as many as are wanted cannot always be obtained. failure is only about ten in a hundred; and, from the observations that I and others have made on those that failed, I am convinced it was from the bad selection of the grafts, because they require to have good and healthy buds; and it is essential to choose vigorous shoots that are neither tender nor immature, and that have two buds well nourished and formed. When I wish to graft anything in summer, when the plants are in full vegetation, was soon as I have fixed on the one that I wish to have grafted, I take off the extreme point of the branch that is to be the graft, and when I see the buds growing large, I cut it off and graft it. This method of grafting has the advantage of not having the protuberance which is seen in plants splitgrafted, or, by application, which amounts to a deformity, produces decay and then death; whereas, by root grafting, only one wound is seen, well closed, and, from its proximity to the ground, in all probability, when it is transplanted, it will have the advantage of being put a little below it, so that the graftitself may put out roots as I have already observed in several of them."-Guiseppe Manetti in Gardener's Mag. for May.

It sppears the Signor has also been successful in grafting the Olive, Berberis, Cytisus, Crategus; and, by the above method, the putting in practise of which, in summer, when the plants are in full vigour, is new.

It will be satisfactory to those occupied in physiological researches to learn, that there is in preparation for immediate publication, a selection from the papers and correspondence of the late Mr. Knight. That these materitas are in very good hands I have no doubt, but I must beg to contradict, as wholly destitute of foundation, the statement made in some of the newspapers that they are confided to my care.—Dr. Lindley in Bot. Req.

It appears, that in raising coniferous plants from seed, the "principal points to be attended to are, to sow the seeds in fine loam without mixture of peat, and with as little sand as possible; to take care that the loam is nearly dry until the seeds have vegetated, and then to administer water only in very small quantities, to stimulate germination by the application of bottom heat, which is, however, to be abstracted as seen as the plants make their appearance above ground."—Processings of Hort. Soc. of London, vol. 1, p.117.

A New Hedde Pruner.—In these days of new inventions, I would beg to put in my claim for a new hedge pruner, which I have, after three years trial, found to make a very heavy process an uncommonly light one. I can, with the greatest ease, prune one side of a hawthorn hedge, 100 yards long and 6 feet high, in the short space of forty minutes; and the price of the whole apparatus will not exceed half the price of a pair of good scissors. If any of your numerous and intelligent readers or correspondents express a wish to have one, I shall send you every information respecting it, without any "consideration" whatever.—James Wright, in Gard. Mag.

Errata, Page 17, 10 lines from the bottom, "Berberis empetrifolia, Bet. Reg. Nat. Ord. Berberaces. Class Hexandria Monogynia."

THE

ay w.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LI.-AUGUST, 1840,

REMARKS ON THE HARMONY OF NATURE, AND EVIDENCE OF DESIGN IN THE WORK OF CREATION.

(Continued from No. XLIX.)

From the remarks made in the June number of the Floricultural Magazine, on the reciprocal dependence of the three kingdoms of nature upon each other, it will be observed, that the whole creation was designed for some wise and beneficial purpose, and that the several parts of nature are beautifully contrived, so that each conduces to the support of the other. If the mineral kingdom had been created of a different consistency to its present, in the first place, no vegetable could grow, and consequently no animal could exist; or if it had not consisted of strata of different substances, suited to our various wants, but had all been of the density of rock, vegetation would then cease to grow. Though some animals prey on each other, yet, as these latter obtain their food from vegetables, all animation must cease to exist, if vegetation was annihilated. Nor is the vegetable kingdom without its benefits from the animal, for if it were permitted to grow without any restraint, not only would the earth become one immense thicket, and many of the weaker vegetables would cease to exist; but as plants inhale that part of the air which is suited to their constitution, and return what is poisonous; therefore it appears probable that if the animal creation were withdrawn, the air would in time be rendered unfit for the existence of vegetables; and this would also be the case with animals, in the absence of plants. Water, which occupies so large a portion of the earth on which we live, is not only useful in facilitating commerce, and supporting such vast numbers of animals as it is known to contain, but is indispensable to the existence of plants and terrestrial animals, and supplies our wants

in a variety of ways. Almost every thing we use, whether as food or raiment, has not been prepared without the application of water in some stage of the process. In all lakes, rivers, and seas, evaporation is continually going on in an invisible form, and mixing with the atmosphere; if this were not the case with water, and that it returned in the form of rain, snow, &c., to water the surface of the earth, the latter would soon become parched and unfit for the growth of vegetables. Thus we are enabled to perceive the care of the Creator for His creatures. in making each part of nature dependent upon another, each with such symmetry performing its part in the great system, and admirably adjusting the quantity of food to the number of its consumants. But a view of the utility, habits, and economy of the vegetable kingdom will tend, perhaps, still more to illustrate the evidence of design in the works of creation.

With regard to the utility of those plants which daily administer to our wants in such a diversity of ways, there can be no question. Those majestic trees, which lift up their lofty heads, and protrude their wide-extended branches with broad and ample foliage, not only supply the inhabitants of hot climates with a shade from the scorching rays of a tropical sun, but supply their wants in a variety of ways; nor is the vegetation of the temperate regions less useful. Some plants contribute to our wants in the form of food; some are used in the healing art, and tend to the restoration of our diseased bodies; while others afford us materials for clothing. as the gossypiums, of which several species are cultivated in warm latitudes, the soft down surrounding their seeds affording the cotton wool of commerce. The woody fibre of several plants, cultivated in our own country, is manufactured in cloths of different kinds, which, when old and worn out, is capable of being made into paper, by means of which we communicate our ideas to persons at a distance, which are transmitted to posterity, and renders us, as it were, contemporary with the wise men of all ages and countries. Not that I would be understood to say that paper is the only material upon which written memorials are made, for this would be wrong: various substances have been used for this purpose in different ages and countries, but the greatest part of which are obtained either directly or indirectly from vegetable matter. trunks of the larger trees are made into numerous articles for the purpose of building and domestic comfort. They constitute the fabric of the merchant ship, by means of which we are enabled to participate of the fruits and delicacies of tropical countries, while our bodies are warmed with the furs of the frigid zone, without experiencing the heat of the one or the cold of the other; and are the "wooden walls of our native isle."

Nor are those minute plants, mosses, lichens, and their allies useless; not only are some of them used as food in northern countries, for instance the Reindeer Moss (Cladonia rangiferina), which constitutes the chief support of the Laplander's Reindeer; the Iceland moss (Cetaria Islandica), and the Gyrophoras, which were the only food which could be obtained for a long time by those enterprising travellers, Franklin, Richardson, and Back-but they perform a most important work in vegetable economy. Trees or plants of large growth, except in a very few instances, cannot exist upon the rocks, if they are not covered with a stratum of earth wherein they may extend the ramifications of their roots, and from which they may derive nutriment; nor will they thrive except this earth contains mixed with it portions of decayed animal or vegetable matter in some form, either aqueous or liquid, or that may be rendered so by the action of the atmosphere or rains. But the services of the former tend so materially to form such places for their reception, that they may justly be denominated their pioneers; for when a volcano has destroyed a tract of land by its scorching lava, or an island rises above the surface of the ocean, mosses or lichens will be seen presently to develope themselves upon their surface. This has given rise to the doctrine of spontaneous production; but what is most probable is, the sporulia (seed orgerms) being infinitely small and numerous, are diffused through the atmosphere, then they light upon substances capable of growing them, as wood or stone, they germinate, firmly adhering to the material on which they settle themselves by means of their thallus, which is of such a gelatinous nature as to enable some of them to attach themselves to the hardest and smoothest stone, and grow, extracting their chief support from the atmosphere. sponge they imbibe and retain a quantity of moisture, and by keeping it in contact with the rock tend to soften it, and facilitate chemical combinations between it and the atmosphere, or by conveying it into crevices of the stone, which, when acted upon by

frost, it rends or breaks, and thus, by a continued process, adds more and more to the formation of mould, which being washed by rains into hollows in the rock, accumulate, so as to form in time a sufficient quantity of soil for the growth of more perfect vegetables, as grass or rock-plants, which decaying, and the soil continually accumulating, in time larger trees establish themselves in their place.

I had intended to have noticed the habits and economy of the vegetable kingdom in this article, but as it is already swollen to an unwarrantable length, I must conclude, leaving that for a subsequent letter.

E. F.

Meivod, June 19th, 1840.

[Our Correspondent has chosen a wide and extensive field, and one which can never be exhausted of interest. We shall be glad to have his remarks on the habits and economy of the vegetable kingdom.—Ep.]

ON THE CULTIVATION OF FUCHSIA FULGENS.

BY A FRIEND TO HORTICULTURE.

The Fuchsia fulgens has now for some years been an object of considerable attraction and interest amongst those who cultivate showy flowers, and it is one of those plants which will not fall into disuse or neglect; few are more ornamental, few are more easily grown and more certain of producing bloom. It is one of those plants which I have cultivated with more than usual success, I am, therefore, induced to trouble you with a few remarks on my mode of treatment. I obtain my cuttings for young stock any time during summer, they are pushed forward and made to form pretty strong plants, from nine to twelve inches in height before the winter, they are then allowed to become gradually dry, and the leaves fall off, and they are then kept in a cold frame, free from frost, till the following spring. They are then brought into a strong heat and freely watered, having had their stems previously cut down, and in about a fortnight they send up strong shoots from the tubers; as soon as I perceive the appearance of this, I shake the whole of the earth from the roots and tubers, and repot into small sized pots, such as will just contain the roots, with a little earth. When this operation is completed, I remove the plants again into heat, and plunge them into a gentle hot-bed, either in

a frame or the bark bed of the pine pit; but a gentle hotbed is the situation in which I find them grow with the greatest vigour. As soon as they have made roots round the side of the pot, they are again shifted into larger pots; the second shift will require about half an inch all round the bole for fresh earth, and ought not to be larger, but rather to shift frequently. The compost I use for the first two shifts is rather light, being about one part yellow loam, one of leaf mould, one of well decomposed manure, and one of sand; the shifting is continued as before, from time to time, as the plants require it, increasing the proportion of loam, and thereby rendering the compost heavier as the plants become stronger. In this way I have grown the Fuchsia fulgens five feet high during one season, and the plant covered profusely with fine scarlet pendulous flowers, than which a more ornamental object cannot easily be conceived.

This ornamental plant requires to be kept in a sheltered part of the greenhouse when in bloom, and not exposed to high winds; without this precaution be taken, the foliage, which is large, soon gets bruised and so injured, as to be quite unsightly. It is seldom so ornamental after the second year, nor does it grow so freely, or bloom so profusely when of greater age and size. I have invariably found young plants do the best, they are the most ornamental and attractive.

A FRIEND TO AGRICULTURE.

At the last Chiswick show, a specimen of this plant was exhibited amongst the single specimens, somewhat about the following dimensions, twelve to fifteen feet in circumference, five feet high above the tub, and the latter was nearly three feet in diameter, quite sufficient for two men to lift, and the plant was in high perfection of foliage and in full bloom. This is unquestionably a highly ornamental plant, but after all, we think it less so than some of the older varieties. The foliage is fine, and, indeed, it is almost too ample, thereby concealing the flower, which, compared with some other varieties, is much less profuse and perhaps less hardy. Fuchsia fulgens has given rise to many new creations of novel floral objects, many of which resemble each other very closely, but others there are which have a totally different habit. We might mention the varieties raised by Mr. May, of the Hope Nursery, Leeming-lane, these we have had for some time, and find them distinct, and as Fuchsias, very beautiful objects. There is also Mr. Standishe's Fuchsia, a very pretty and most abundant blooming plant .- ED.]

REMARKS ON THE CULTURE AND HARDINESS OF CLEMATIS SIEBOLDII.

BY G. READ.

As a hardy climber, there are but few plants equally ornamental, and none more so than the Clematis sieboldii. It is a plant of remarkably easy culture, producing the greatest profusion of blooms of any plant that I know. I have just stated that it is a plant of easy culture; and, therefore, to give any directions how to proceed with it may be thought superfluous. may, however, be some persons who are not very familiar with the culture of plants of any description, I shall offer a few plain directions, with the view of assisting such, and with the hope of drawing the attention of others to the cultivation of this, one of the most beautiful plants in nature. Its propagation is a matter with which I shall not trouble your readers, since I am not very conversant with this department of gardening myself. I purchase such plants as the one in question, and my spare time and attention is then expended on their culture; therefore this is the only department in which I feel competent to instruct.

I have several plants of this Clematis, which I treat as follows :- Towards Autumn, I place them out of doors, against the garden wall, when the pots are covered round the sides and over the surface with dry litter; the pots themselves are set upon slate to keep the worms from entering at the holes in the bottom. The stems of the plant, which are very slender, are, of course by this time well ripened, and are trained over a wood trellis. The whole of the branches are securely tied, so that they do not receive any injury from the friction occasioned by the high winds. remain here throughout the winter, and towards the end of March I take them into the greenhouse; they are, however, first shifted into fresh soil, and are kept in the greenhouse about three weeks, and from this department I remove them to the forcing-house; where they receive a slight degree of excitement in being submitted to a temperature varying from 50 to 60 degrees Fahrenheit. This is the temperature I keep my forcing-house, in which I bring forward my early flowers. I ought to observe here, that with respect to pruning, I do not find that this plant requires anything

more doing in this way, than merely cutting out the dead parts of the slender twigs or stems. I never do more than this; but always cut away the old ties, and replace them with new ones. In doing this I may observe, that I would not advise that the whole plant should be untied at once, but that a few ties only should be cut away, and again replaced before any more are undone. Unless this be attended to, the little slender stems become entangled, and in replacing them, even with the greatest care, they are often broken and otherwise injured. This is an evil common to all plants of similar habits; and, therefore, I mention it with that view, as much as with reference to the plant in question. During the bright weather in summer, when this plant is come fully into bloom, it is removed to the greenhouse, and if an airy situation, partially shaded, can be given to it, so much the better. There is seldom any great necessity either for much tying of young shoots, or pruning, as the plant blooms so freely, that the luxuriance of the shoots are greatly checked, and in full bloom there is scarcely either foliage or shoots to be seen.

The compost which I grow my plants in, is a strong rich loam, containing bone dust, horn shavings, and other stimulating manures; these are mixed up with the earth, many months before it is used. The plants are grown in rather large pots, and very carefully attended to in watering. Should you think the preceding remarks worthy your notice, you are at liberty to use any part of them which you think deserving of attention.

G. READ.

Alfreston Hall,

[The Clematis sieboldii deserves all that has ever yet been said in its favour, and we do not, therefore, feel any hesitation in giving the whole of the preceding remarks, which we think are calculated to draw some attention to this very beautiful plant. Were it a tender stove twiner, capable of being brought to high perfection only in a high temperature, then its value, as an ornamental plant, would be greatly lessened; but this plant does not require either the protection of a stove or greenhouse, but may be grown to the highest perfection in the open air, in any sheltered situation, growing more or less vigorous according to the nature of the soil in which the roots are placed. This is not a mere opinion, but has been amply proved in various instances within our own knowledge, one of which we shall mention. We refer to a plant exhibited at the late Chiswick Show, by Mr. Barnes, of or near Bromley, who informed us within these few days, that the plant in question had been fully exposed to the open air for three successive winters. Whether the pet was pro-

teeted as described above, we are not aware. Mr. Barnes has also grown it in the open border of his flower garden for several years, where it assumes a most robust and luxuriant habit, and he says it is one of the hardiest plants about the place. The plant exhibited at Chiswick, was trained to a flat trellis, and would be about four or five feet across, and probably a little more in height. The pot was large for the size of the plant, and the latter was clad with many hundreds of splendid flowers, besides the appearance of an infinite succession of blossoms in various stares of forwardness.

Some time before we left the Sheffield garden, we planted out into an open border, a single specimen of C. sieboldii, and also C. azures grandiflors, but what has been their success during the present summer we are not aware, as our time, when last there, was too limited to enable us to make a very careful examination of the garden. We had not, however, any doubt of their hardiness at the time, and we expect they are now vigorous and well established specimens.—ED.]

[We saw the C. azurea grandiflore, a robust plant, covered with large flowers in the month of June.—PRINTER.]

REMARKS ON THE EXHIBITION OF PLOWERS RECENTLY HELD AT CHISWICK.

BY A VISITOR.

Being a Visitor at the late Horticultural Fete, held at Chiswick one of the things with which I was particularly struck was the singular appearance of the Geraniums. First, their great size, and secondly, the remarkable uniformity in habit that is in their foliage and the form of the plants. The peculiar way in which they were all dressed up, and every little twig or branch tied to an upright stake, and further, that there was not either a leaf or flower stem higher than the adjoining one, the whole of the plants appeared as if cropped or clipped into this globular form. I have since I saw these plants felt quite undecided whether I am right in my taste, as I cannot see that beauty in plants so treated, as in such as are grown in a more natural and graceful form. I do not object to a few supports being used where it is necessary, but many of those I saw exhibited, had more than fifty or sixty to each plant. (I suppose I am right in saying each plant, as there was only one plant in each pot, this, of course, as a Visitor, and without the opportunity of examination, I could not decide.) It was quite a novel sight to me who had never seen Geraniums grown in this way before; and instead of measuring, as many of them would have done, four or five feet across, and not more than

two and two and a half feet high, I had been accustomed to see Geraniums, in ordinary cases, not more than quarter the size. I should, therefore, feel particularly obliged to any of your friends who will send a few remarks on the culture pursued by those who grow their plants to so unusual a size. That is, the kind of soil, the time of propagation, the temperature, and times and manner of shifting.

BY A VISITOR.

[We have heard others express doubts that the peculiar habit into which the Geranium is thrown by those growers who raise plants for competition, such as Gains, Cattleugh, and others, was objectionable, owing to its formal and trim appearance, every leaf and stem being so arranged as to be at equal distances from each other. Were we to express an opinion on this matter, it would be that the cultivation of the Geranium like that of the Pink, the Polyanthus, the Dahlia, and other florist flowers, when exhibited as objects of skill and artificial cultivation, the mode of treatment thus pursued is quite a legitimate one. It is the avowed object to produce an artificial object, as much so as it is with the florist who dresses down his truss of Auricula flowers to a certain number of peeps, or those who exhibit Pinks in dressing the flowers, and thereby leaving some and taking others. We can see no objection to this mode of growing the Geranium; if the principle be admitted in one case, it ought to be so in others. Indeed, all plants in a state of cultivation are in an artificial state, and, therefore, to compare them with what they are in nature, would be setting up a false standard which would oppose itself to gardening, and render the art unavailing. In fact, the whole science of practical gardening consists of a system or process of skilfully performed operations, and the greater extent to which it is carried the more successful will the operator consider himself. That this is the prevailing opinion and taste, it is only necessary to refer to the Standard Rose, of which no plant can have a more artificial appearance, and yet we find it is patronized, and many thousands are annually raised and sold in this country.-ED.]

PROPERTIES OF THE HEART'S-EASE.

(From Glenny's Florist's Annual).

The flower should be as nearly circular as possible. The petals should be broad, and lap over each other sufficiently to show as little irregularity or division as possible, where they meet at the outer edge or outline of the bloom. The petals should be thick, flat, and smooth in the outer edges, without any indenture whatever in any one of the petals. The colours should be very distinct, and not run into each other. The ground, whether a yellow, straw colour, or white, should be without stain; a white ground with

yellow clouds or stains, or a yellow with lighter shades in the same petal, would be imperfect. The marking on either or all of the petals should be very decided, uniform, and distinct. The two upper petals should be alike, whether self-coloured or pencilled; the two side petals should be alike, whether self-coloured or pencilled; and the bottom petal should be perfectly uniform. The eye should be dark, whether large or small, and the radiating marks should be dark and distinct in all the petals. The flower should be large, and the texture fine, and the colours should be rich, dense, and have the appearance of velvet.

The colours should stand fast and not flush—there can hardly be a worse, though it is a prevalent fault. The flower should be flat when placed in a stand, which, in most cases, follows as a thing of course, if each petal is flat; but there are flowers disposed to crumple or curl when the individual petals are flat. The plant should be dwarf, shrubby, the foliage broad, the footstalks long, and the blooms be thrown above and outside all the leaves.

CULTURE OF THE HEART'S.EASE OR PANSY.

(From Glenny's Florists' Annual).

The prominent station which the Pansy is taking among florists' flowers renders its culture a matter of some importance, more especially as many persons complain that after they have grown them some time, the flowers become dwindling, and the plants straggling and unhealthy; while, in fact, nothing is easier cultivated. We are favoured by two correspondents with their own plans; and, though not similar, they both, perhaps, answer well enough. The first says, "I always choose a border which receives no sun after twelve o'clock, for they require to be cool at least two-thirds of the twentyfour hours; and, as the plants throw outside branches, or the roots throw up young shoots, I take them off and plant them out, even before they are struck, in a similar situation to that occupied by the old roots. Very few of the side shoots or slips will fail to root if well watered; and I have constantly a succession of large flowers. When my successions are well secured, and the young plants are giving fine blooms, I am careless about the old roots, for they be let go as they please; and although the flowers come

smaller, they come in immense quantities, so that the plants spreading over the border, present an entire mass of bloom. When they decline in beauty, root them up, part any that are valuable; dress the border with old rotten melon bed or other rich manure and a little fresh loam, replant the strongest in the same place, and treat all the younger plantations in turn the same way."

The second observes, that "they are a tribe which flourishes most in fresh loam, but in the absence of this, the bed must be well dunged. I have known them to thrive in stiff loam, almost like clay, better than in a rich border within a few yards, which was made on purpose for them. Care must be taken to prevent the plants from growing straggling, by cutting them well in, and removing them once a year at least; but as the old roots perish or dwindle like the stools of pinks, those who require large flowers must pipe or cut them once a month, and strike them under a hand-glass, with or without gentle bottom heat, according to the time of year, and re-form their beds every year like beds of pinks."

For our own parts we think the first directions the most clear and defined, though we have seen Heart's-ease flourish like weeds under trees, in shady borders, sunny beds, pots, &c.; and the best small collection we ever saw was in thumb pots—they had been cuttings three weeks before, and placed one in each pot in a cucumber frame, of moderate heat, where being shaded and watered, they had actually perfected the flowers which were in embryo on the cuttings, and on as large a scale as those on the plants from which they had been taken. The whole were afterwards planted out, and before the month of June were fine, strong, healthy blooming plants, as fine as any we had seen. We think that in striking cuttings, bottom heat is of great assistance, for it seems to hasten the operation considerably, even in warm dry weather. It is needless to say they should be shaded carefully, or the plants would soon be drawn up.

NOTES BY THE EDITOR.

Chiswick Horticultural Show, July 4 .- This is the last show to be held at the Chiswick Gardens for the present season. It is evidently the principal object of the managers of this Society to avail themselves fully of the advantages of holding their shows during the early part of the season, whilst the nobility and principal families continue in London. That, in a pecuniary point of view, they are fully justified in adopting, and for the present continuing this arrangement, is evident from the great concourse of visitors which frequent the Gardens on these occasions, and the large annual revenue arising therefrom; which, according to report, is stated at about £5000, an amount which we do not think exaggerated. Although the season had rather passed by for some of the early Summer flowering plants, there was still a large number of very splendid objects exhibited, both as single specimens and in collections. To specify these, so as to give an idea of their individual beauty, would be a hopeless task. Geraniums formed a striking feature, especially those belonging to Cattleugh, of Chelsea, and Gains, of Battersea. The magnitude and beautiful perfection to which this tribe of plants are now brought, is quite beyond the conception of those who have not seen the collections of those gentlemen of whom we speak. Heaths, the two collections of thirty species each, exhibited by Mr. W. Barnes and Mr. Butcher, were very fine. Amongst Orchidaceæ, the successful competitors for the large collections were Mr. Mylam and Mr. Redding, as gentlemen's gardeners, and Messrs. Rollisson, as nurserymen. Single plants not in bloom. Mr. Mylam and Mr. Pratt were also successful competitors, the former for a Nepeathus distillatoria, and the latter for plants of Rhododendron campanulatum, said to be new varieties. These were in a very high state of cultivation. As ornamental plants in bloom, whether old or new, there were some handsome specimens, and the first prize was awarded to Mr. Barnes, for a plant of Cleriodendron paniculatum. This was the finest plant of the kind we have ever seen. In this class of plants there were also exhibited, by Mr. Brown, of the Slough nursery, Lilium venustum, one of Siebold's Japanese varieties, being of an orange colour, and flowering in a stiff and

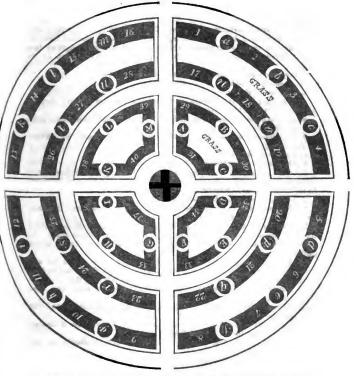
compact panicle, at the extremity of an upright flower stem; the plant was about 41 or 5 feet high. The same gentleman exhibited several other species of this genus in a high state of perfection and cultivation. Amongst the fruit there were some good specimens of Grapes, and one very fine sample of Peaches. But the great feature in this exhibition was the display of Roses, which, considering the high winds and unfavourable state of the weather during the day preceding the exhibition, was very beautiful. those, however, who are unacquainted with the individual properties of the Rose, and with the newer kinds and the prevailing defects and excellencies which characterise the several families; -those who possess but a limited knowledge of these particulars would feel discouraged in their endeavour to ascertain how the various kinds are classified, or whether, in fact, any arrangement was at all observed in placing together in the same box or group the kinds belonging to each of the several sections or families. The want of an obvious arrangement or classification of the kind to which we allude, would, on the occasion in question, be a good deal felt. Were it possible to have the Provence roses in one place or division of the table, the moss roses, French roses, hybrid Provence, hybrid China, and so on, with the other sections or families into which they are usually divided, displayed in successive divisions following each other, and by requiring that all the competitors should exhibit the particular kinds in their respective and appointed situations, the minds of ordinary observers would be greatly assisted in discovering for themselves that the Rose does possess characters sufficient to justify and distinguish the natural groups into which it has been arranged by cultivators. One means, at least, would thus be afforded for extending in a clear and intelligible form a better knowledge of the Rose. It would also be a means of lessening what, by the present mode of exhibiting these flowers, tends to dishearten and confuse the mind by the utter hopelessness not only of acquiring such a knowledge of them as to distinguish the kinds by name, but of even being able to distinguish a common Provence Rose from a hybrid Provence, and far less to be able to detect the characters by which the whole of the other groups are recognized. Some arrangement of this kind would greatly lessen the difficulty of judging these flowers, nor would the lessening of the difficulties to the Judges be the only advantage in this respect; but, as a matter of course, the chance of arriving at more satisfactory and accurate results in their comparisons would necessarily follow. We think it would be to the advantage of the Society, and greatly so to the competitors themselves, that some better plan were adopted for the display of this beautiful flower. What we refer to more particularly as defective in the arrangement is, that each competitor is allowed to display his flowers in any way which he pleases; and although some arrangement, in accordance with what custom has established, is generally observed, yet we believe no rule exists to prevent competitors departing from it, if they choose. The natural result of all this is, that the competitors appear more anxious to give effect to the appearance of their stands than to display the beauty of the individual flowers. We are quite aware that any plan that could be adopted would be more or less defective, and therefore have its objections; but of one thing we are quite sure. that some plan by which amateurs could distinguish more readily than by the plan in present use is very desirable, to show that the Rose is separated into families and groups by characters obviously distinct; and these families are again composed of varieties, more or less so. The want, however, of decided characters, by which to distinguish the individual varieties of each family, is a matter of but little consequence, if the families themselves be exhibited in a clear and obvious form.

EDITOR.

PLAN FOR A FLOWER GARDEN.

BY THE EDITOR.

The flower garden at Bury Hill, of which the accompanying engraving is a representation, is one of the best efforts of flower garden arrangement which we remember to have seen. There is a completeness and harmony in the whole design not usually met with.



a. Pansies.—Choice varieties are propagated freely by cuttings, under a hand glass in any light rich soil.

b. Ranunculus.—Require a light sandy soil, and to be planted in Autumn.
c. Pentstemon gentianoides.—A handsome hardy perennial, growing from twelve to eighteen inches high, and easily increased by cuttings or layers.
d. Anemonies, (Single).—Increased easily, either by division of the roots

or by seed, which, if sown as soon as ripe in shallow pans or boxes, and the young plants planted out in the autumn, they will flower abundantly the

following spring.

e. Lobelia fulgens - Requires to be protected from severe frosts during the winter; it is easily increased by dividing the roots, which is best done in the autumn, potting the offsets singly in small sixty pots, in good rich soil, and keeping them in a cold frame during winter.

f. Verbena teucroides.—Is liable to be injured by frost, unless protected: it is, therefore, advisable, to strike a quantity of cuttings in the autumn, keeping them in pans during winter, and planting them out in the end of April, or

early in May.

- g. Stenactis speciosa.—Hardy herbaceous plant, propagated by division of the roots.
- h. Salvia fulgens.-Will survive the winter if not very severe. Cuttings struck in the autumn and planted out early in May, will flower abundantly
- i. Calceolarias (herbaccous) .- Increased most freely by seed, and, if sown in the autumn, and kept in a cold frame during winter, planting them out as soon as all danger from frost is over, they will flower for a length of time.
- k. Lythrum alatum,-Hardy herbaceous, propagated by division of the roots.
 - 1. Tropæolum peregrinum .- Produces abundance of seed.

m, Anemone (Double).

n. Crucianella stylosa.

- o. Verbenas (Mired)-Require to be protected during winter; they are all easily increased by layers or cuttings.
- p. Fuchsia globosa.-Should be well hardened in a cold frame, and planted out early in May.
- q. Delphinium sinense,-Hardy herbaceous plant, increased by division in the Spring.

r. Verbena melindres.

s. Erysimum Perowfskianum .- Hardy annual.

t. Lobelia elegans.—Is best protected in the beds by fern or any similar covering, to keep it from the frost and too much wet. It may also be treated in the same way as L. fulgens.

u. Helichrysum macranthum - Hardy annual.

- 29. Verbena venosa.-This is hardy in some situations, and may, therefore, be treated as a hardy perennial.
- 30. Petunia phanicea .- Varieties, propagated by cuttings or by seed, which they produce abundantly, and may be sown in autumn to flower early. In sheltered situations these are splendid ornamental plants for the flower
- 31. Heliotropium peruvianum.-Is rather tender, and should be well hardened in a cold frame previous to planting out, which should not be done
- too early, as a slight touch of frost renders it sickly for a long time. 32. Dwarf Rocket Larkspur .- Hardy annual, may be sown any time
- during spring. 33. German Asters.-Half-hardy, should be raised on a gentle heat to bring them into flower early,
- 34. Geraniums,-Mixed varieties; autumn or middle of summer is the best time for increasing these for the following season.
- 35. Calceolaria, shrubby.-These and the Geraniums should be well hardened previous to planting out.
- 36. Tulips, double.-To be replaced by French Marygolds, or any similar annual.

37. Gilia tricolor .- Hardy annual.

- 38. Tulips, single.—Their place to be filled when out of bloom by China Asters, &c.
 39. Fuchsias.—Varieties.

40. Geraniums.-Mixed.

A. Clarkia tricolor .- Hardy annual.

B. Anemone Hortensis. - See Anemone, single.

* * *.



1 Rival King 2 Salters Beauty of Bath

C. Tigridia pavonia.—The roots should be taken up in the autumn, and preserved in a dry place during the winter.

D. Gladiolus Natalensis.—These should be planted out after they have

sprung in the pots.

E. Enothera speciosa.—Hardy herbaceous plant, propagated easily by division of the roots.

E. Alexandra institution and the propagate freely by partitions of the latest the propagate of the pro

F. Alonsoa incisifolia.—Is increased freely by cuttings. It should be well hardened previous to putting out.

G. Salvia patens - May be treated the same as S. fulgens.

H. Nigilea gracilis.

I. Anemone .- Double.

K. Nolana atriplicifolia - Hardy annual, sown in March.

L. Nierembergia calycina.—Propagated by cuttings, and kept in a cold frame during winter.

M. Œnothera missouriensis.—Is increased freely by cuttings, or by pieces of the roots, and is pretty hardy.

We are indebted to Mr. Scott, the gardener at Bury Hill, for the sketch and the matter of the preceding remarks.

REFERENCE TO PLATE LIII.

Fig. 1. RIVAL KING.

NAT. ORD. VIOLACEÆ. CLASS PENTANDRIA MONOGYNIA.

.This very pretty variety of geranium has been sent us by Messrs. Salter and Co., of the Victoria Nursery, Weston-road, Bath, accompanied by the following remarks:—"You will perceive that the prolific habit of flowering, and the greater brilliancy of colouring, constitute the chief merit of this variety, and for general cultivation (especially for the trade), render it much superior to 'Gains' King.' This variety had awarded to it the second seedling prize at the Victoria Gardens' Exhibition, Bath, held during the present season."

Judging from the clusters or trusses of bloom sent us, we should take it to be an exceedingly prolific bloomer. The specimen of foliage which was sent us with the flowers, was stiff and of strong robust habit.

Fig. 2. SALTER'S BEAUTY OF BATH.

NAT. ORD. VIOLACEÆ. CLASS PENTANDRIA MONOGYNIA.

This is, we think, a very beautiful variety; it has been sent us by the same gentleman who forwarded to us the one noticed above. Its nearest ally appears to be the 'Sylph;' but it is said to possess "a larger blotch, and being equally free to bloom as the 'Sylph,' will be a more ornamental variety than the present favorite."

The first seedling prize was awarded to this variety at the Victoria Gardens' Exhibition, Bath. In the present instance, we can only form our opinion from the detached flowers, and cannot, therefore, speak with certainty; but the opinion which we have formed of this variety is a very favourable one. It may, probably, not be so free a bloomer as the Rival King; but the colouring of the flower is superior, and the petals appear to be of a firmer texture.

The artist to whom the flowers were sent, has delineated the blooms exactly in the way in which they reached him, after travelling a distance of several hundred miles; it is, therefore, hardly necessary to say, that justice has not been done to these blooms.

Fig. 3. SILENE COMPACTA, Compact Flowering Catchfly.

NAT. ORD. CARYOPHYLLE ... CLASS DECANDRIA TRIGYNIA.

This is a very free flowering and ornamental biennial plant, flowering most profusely for several months during the summer and autumn. A plant was sent to us during the spring of the present year, and we find it an exceedingly desirable one for autumn flowering. We scarcely know of a more beautiful and showy plant.

NOTICES OF NEW PLANTS.

TRADESCANTIA TUMIDA, Gouty-jointed Spiderwort.

Bot. Reg.

NAT. ORD. COMMELINACEÆ. CLASS HEXANDRIA MONOGYNIA.

This is a half hardy plant, raised in the garden of the Horticultural Society, and a figure was made of it during last autumn. The flowers are of a purplished colour, and the leaves thick, fleshy, and much recurred backwards. The stem, as the name implies, is greatly swollen at the joints, and by this character it is said to differ from T. Humboldtiana, to which it is nearly allied in other respects.

It is a perennial, requiring the protection of the green-house, growing freely in sandy loam, but requiring to be protected against wet and damp during winter.

LŒLIA RUBESCENS, Blushing Lælia.

Bot. Reg.

NAT. ORD. ORCHIDACE E. CLASS GYNANDRIA MONANDRIA.

This is the smallest flowered Lælia hitherto described. Its native country is unknown. The flowers are wholly scentless,

Its nearest affinity is with L. primulina. In cultivation it succeeds best suspended from the roof of the stove, tied to a piece of wood, with the roots partially covered with moss.

LOPEZIA LINEATA, Line-leaved Lopezia.

Bot. Reg.

NAT. ORD. ONAGRACEÆ. CLASS MONANDRIA MONOGYNIA.

A very pretty half-shrubby, half hardy annual, flowering beautifully during the autumn months. It attains the height of from two to three feet, and produces a number of rosy-red flowers, beautiful at the season in which they are in the highest perfection, viz., December and January. We are not quite sure that this is the same species which we saw in the Botanic Garden, Liverpool, about eighteen months ago. The one to which we refer was shrubby, and its chief merit was its flowering late in the autumn and winter, and was remarkable also in being what was said to be the only shrubby species described. Dr. Lindley observes, that those who are students of the British Flora, will not fail to recognize, in this gay Lopezia, the same features as those of our own Enchanter's Night Shade, with which it is associated in natural arrangement. In this plant, the second stamen of Circæa is converted into a spoon shaped petal. The species is a native of Mexico, and the plants have been circulated in this country through the Horticultural Society.

BRASAVOLA VENOSA, Vein-lipped Brasavola.

Bot. Reg.

NAT. ORD. ORCHIDACE #. CLASS GYNANDRIA MONANDRIA.

A pretty white flowering species, resembling B. nodosa in habit, but with much larger flowers. The flowers are deliciously sweet. Imported from Honduras by Messrs. Loddiges.

LUPINUS LEPTOCARPUS, Slender-fruited Lupine.

Bot. Reg.

NAT. ORD. LEGUMINOSEÆ. CLASS DIADELPHIA DECANDRIA.

A hardy, straggling biennial plant, growing two or three feet high, and blossoming in the latter part of summer and autumn, when it becomes a gay decoration of the flower garden. It has much the habit of L. rivularis, to which it indeed nearly approaches.

Raised from Seeds in the garden of the Horticultural Society; a native of Balanos, found in pine woods 8,000 feet above the sea. The flowers are blue.

BOUVARDIA TRIPHYLLA, Var. Splendens.

Bot. Reg.

NAT. ORD. CINCHONACE ... CLASS TETRANDRIA MONOGYNIA.

This plant was some time ago figured in the Botanical Magazine, under the name of B. splendens; but Dr. Lindley thinks it undeserving of this distinction, considering it a variety only. That it is more than a variety we shall not contend; but as such it is very distinct. The foliage is more pubescent, and of a greyer hue. The flowers are of a more brilliant scarlet, and the stems are of a deep purple colour. It is also of a more robust and stronger That these form specific distinctions, we shall not stop to decide. Great allowance must be made for the changes of soil and mode of treatment to which all plants are liable in a state of cultivation; and as this plant cannot form an exception, those characters may disappear by which Dr. Graham's specimen was distinguished, when the plant is cultivated. under other circumstances. With regard to culture, the following remarks are so much to the purpose, we shall take the liberty of quoting them :-"The best way to treat it, and indeed all the Bouvardias, is to plant them out in the American border about the end of May; and after flowering in the autumn, or rather when partly injured by frost, to take them up, and put them into as small pots as possible, and then place them under the stage of the green house, or in any dry cellar. In fact, they may be treated in the same way as the common scarlet geranium, only observing to keep them rather dry in winter. In the spring (end of February) they should be taken out, fresh potted, and placed in a more favourable situation for growing, so as to be again ready for planting.

ONCIDIUM PACHYPYLLUM, Thick-leaved Oncidium.

[Bot. Mag.

NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONOGYNIA.

This is a handsome Oscidium, a native of Mexico, with very thick foliage. The panicle of flowers is rather long, and much branched, and the blossoms are of a greenish yellow, and slightly flagrant. It is in the Woburn collection.

MARICA HUMILIS, Var. 2, Lutea Humble Marica, Marica Yellow variety.

[Bot. Mag.

NAT. ORD. IRIDACEÆ. CLASS TRIANDRIA MONOGYNIA.

This is a small iris-like plant, with yellow flowers, a native of Brazil, cultivated in the Glasgow Botanic Garden. It is of course a tender plant, requiring the temperature of the stove.

LŒLIA FURFURACEÆ, Scurfy-stalked Lælia.

Bot. Mag.

NAT. ORD. ORCHIDE E. CLASS GYNANDRIA MONANDRIA.

This is another plant, flowered for the first time in the Woburn gardens, where it was received from Mexico through Mr. Parkinson. The bulbs are small and furrowed, and the flowers are large and rose coloured.

RHODODENDRON CAUCASICUM HYBRIDUM HYBRID, Var. of Rhododendron Caucasicum, [Bot. Mag.

NAT. ORD. RHOBORACEÆ. CLASS DECANDRIA MONOGYNIA.

This appears to be a slender habited variety of Rhododendron with white flowers, said to be the offspring of R. Caucasicum and Azelia ponticum albiflorum. It is also remarked that it cannot be considered an improvement on either parent. It has been raised in the Exeter nursery.

ZYGOPETALUM AFRICANUM, African Zygopetalum.

Bot. Mag.

NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONANDRIA.

"I think there can be no question on the propriety of referring to this plant Zygopetalum, the first of the genus that has been discovered inhabiting the old world. It was sent by Dr. Whitfield, from Sierra Leone, to the Woburn collection, whence Mr. Forbes has obligingly transmitted the present flowering specimen in December, 1839."

DENDROBIUM AMPLUM, Ample Dendrobium.

Paxton's Mag.

NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONANDRIA.

As a Dendrobium, this is a most singular plant. The lower part of the flower is quite heart-shaped, pointed, and of a dark-brown colour.

The genus is one which contains a very great number of very ornamental species, and the one in question is both ornamental and curious. It was found by Mr. Gibson, in great abundance, on the Khoseea hills, in the East Indies, and is now cultivated in the rich collection of Messrs. Loddiges.

ERICA MACNABEANA, Mr. Mc Nab's Heath.

NAT. ORD. ERICACEÆ, CLASS OCTANDRIA MONOGYNIA.

Most of the Heaths are very beautiful, but the one in question is superlatively so. The habit of this variety is compact, with short foliage, and long fleshshaped, rosy-coloured flowers. Mr. Paxton makes some remarks on the continual change of taste which is ever taking place in the floricultural world; and, amongst other classes of plants, Heaths have sometimes been held in high estimation, and at other times apparently ceased to attract attention, and that only a few years ago they were in great favour, and immediately afterwards they fell into disrepute; but he further adds, "We have real pleasure in stating, however, that this feeling was not destined for continued existence, and that both gardeners and amateurs are now very generally relieved of so ignoble an impression. In the absence of any better criterion, we usually form our conclusions as to the degree of estimation in which any tribe of flowers is held, by the attention it receives in the different nurseries. These establishments almost invariably take their tone in accordance with public desires. Far from speaking this disrespectfully of any firm, we are confident that it ever must be so; and directly a commercial gentleman begins to devote attention to a group from which little or no profit can be reaped, he ceases, to a proportionate extent, to belong to his own cast, and ranks as an amateur. But in the instance before us, besides the extraordinary regard which Heaths are receiving in almost every nursery we visit, private gardens and floricultural exhibitions offer a similar confirmation of our position, that a remarkable revival in their cultivation has recently occurred." A just tribute is paid to Mr. Mc Nab, Curator of the Edinburgh Botanic Garden, for his skill and successful cultivation of Cape Heaths. His excellent pamphlet on their culture ought to be in the possession of every admirer and grower of Heaths.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

EPIPHORA PUBESCENS.

This little orchidaceous plant grows to the height of about six inches, has a flexuose scape or flower stem, terminated by a few fragrant yellow flowers streaked with red. It is a native of the Caffre country, and is in the possession of the Messrs. Loddiges.

SPREKELIA GLAUCA.

A new Jacobæa lily, a native of Mexico; it has flowered in the garden of the Horticultural Society. The leaves are narrow and glaucus. The flowers are smaller and paler in colour than the old Jacobæa lily.

PASSIFLORA VERRUCIFERA.

This passion flower is related to P. incarnata and P. edulus, but distinguished from these by the sepals and tracts bearing deep green wart like glands upon the margin. The flowers are bright green, with a bright purple flamentous crown. It is in the collection of Mr. Harris, but its native country is unknown.

CIRRHOPETALUM PICTURATUM.

A small plant, a native of India, bearing flat umbels of purple flowers, stained

with dark red. It grows to the height of from five to six inches, nearly related to Balbophyllum, and is cultivated by Messrs. Loddiges.

CIRRHOPETALUM AURATUM.

This has golden yellow flowers, in other respects it is much like the last. It is fragrant.

ONCIDIUM PALLIDUM.

This is a native of the Brazils, has been introduced from thence by Lacombe, Pince, and Co., of Exeter. The leaves are of a sea-green, like those of Maxillaria Rollissonii, the panicle is nearly a foot long, and the flowers like those of O. devaricatum. It is also nearly related to O. Harrisonii.

STANHOPIA MARTIANA.

As this is an unusually interesting plant, we shall quote Mr. Bateman's note and description of it, communicated to Dr. Lindley. He says this is " a native of Mexico, discovered by Baron Karwinski, in 1827, and sent by him to Knypersley; it flowered for the first time in May of the present year. It is one of the most distinct and magnificent species of the extraordinary genus to which it belongs, and in the magnitude of its blossoms is second only to S. tigrina. The sepals are straw-coloured, faintly and sparingly marked with clusters of little vinous dets. The petals appear transparent white, with large spots of intense crimson; the lip is also a clear ivory white, except a slight discolouration at the base. It is, however, in the horns of the latter member, that the most striking peculiarity consists. These are of great size and strength, and might with propriety be likened to elephant tusks; their extremities. moreover, are twisted into small cirrhi, a circumstance wholly without precedent in the genus Stanhopea. The nearest affinity of the plant is, perhaps, S. saccata, but the points of distinction between the two species are so numerous and obvious, that it is not necessary to contrast them. The name of Martiana, which I have given to the species, is designed, I need scarcely say, to compliment the illustrious professor of Botany, at Munich."

Mrs. Withers has prepared a figure, which will appear in an early number

of " The Orchidaceæ of Mexico and Guatemala."

DENDROBIUM REVOLUTUM.

A new species, imported from Sincapore, by Mr. Cuming. It is cultivated both by Messrs. Loddiges, and Mr. Barker, of Birmingham. The flowers are about the size of D. pierardi.

DENDROBIUM TERES.

This is also a native of Sincapore, and grown by Messrs. Loddiges. The flowers are white and fragrant.

DINEMA PALEACEUM.

This is a native of Guatemala; a plant of little beauty. The flowers are straw-coloured.

DENDROCHILUM FILIFORME.

Interesting in being the first of the genus that has reached this country in a living state; it is not very ornamental, having minute greenish brown flowers, on a slender spike, six inches long.

ABUTILON VITIFOLIUM.

For the introduction of this noble evergreen plant, which in Ireland is hardy, and which will probably be nearly so in England, the country is indebted to Capt. Cottingham, a zealous Irish horticulturist. The following note concerning it, has been received from Mr. Mackay, of the College Botanic Garden, Dublin.

"I herewith send you specimens of an Abutilon, of which my friend, Capt. Cottingham, sent lately a small plant to the Horticultural Garden. It was

raised by him about four years ago, and a plant of it from which the flowers and leaves I now send you were taken, has stood in a south border, without any protection for the last three years in our garden, as it has also done with Capt. Cottingham. It forms a handsome small tree, about six feet high, and probably grows to a much greater size in Chili, which is its native place, and from whence Capt. Cottingham procured the seeds from whence it was raised. The flowers when fully expanded are white, but in drying change into an azurean blue. It agrees very well with the description of Sida vitifolia of D. Candolle's Prodromus, Vol. 1, p. 471.

The flowers are large, as stated by De Candolle, but not rose coloured in

our plant: it may, however, vary as to colour.

From the specimens before us, the leaves appear to be as large as those of the vine; and the flowers, which grow in umbles, are fully three inches in diameter. A figure of it will appear hereafter.

SALVIA HIANS.

A very fine species of sage, with deep blue flowers and white lip, resembling those of Salvia bicolor, but far more handsome, and with coarsely wrinkled sagittate leaves. A beautiful hardy perennial, introduced to this country by the Honourable Court of Directors of the East India Company; it flowers in May and June, and grows about two feet high.

TRIFOLIUM INVOLUCRATUM.

A herbaceous plant, with numerous heads of gay lemon-coloured flowers, raised from Mexican seeds.

Dr. Lindley says, this species has sometimes been confounded with T. tridentatum. It would make a good plant for rock work.

CLEOME LUTEA.

A pretty herbaceous plant, rising to the height of about two feet, and bearing yellow flowers. It is a biennial plant, and a native of North West America.

ACONITUM OVATUM.

Dr. Lindley describes this as a very ugly, but a most curious plant, being no other than a hardy Aconite, with undivided leaves. The flowers are a dull, purplish green. It is a native of Cashmere.

EUTHALES MACROPHYLLA.

A very handsome herbaceous plant from the Swan River, introduced from thence by the Horticultural Society, the seeds having been purchased from Mr. Drummond. It grows to the height of about four feet. The foliage is broad, and about six inches long, and the flowers are large and showy, yellow and brown. It began to bloom in the month of May, and is likely to continue blooming for two months longer.

MISCELLANIES.

We have been informed, upon the best authority, that the Pentstemon fruticosa, which has latterly began to excite some interest, is synonymous with P. gentianoides, var. Coccinia. It is probably generally known that P. fruticosa was raised by Mr. Booth, of Hamburgh, and without being aware that the same plant had been raised in this country, named his own as above, and it has since reached this country under the name of P. fruticosa. We have seen plants both of this and the P. gentianoides, growing in an open border, and within a yard of each other; and, although not in bloom at the time, their identity is evident.

In the garden of Mr. Clark, of Noble Thorp, near Barnsley, in Yorkshire, there were pointed out to us plants of Geranium pratense, with flowers striped blue and white. The plants were some years ago collected near Boroughbridge. Some of the plants had changed the colour of their flowers to white.

"A large importation of these plants (Orchideæ) arrived at Kingsbury, at the close of last September, an awkward time of the season to begin to grow plants, whose natural winter was fast approaching. I laid them on shelves in the seed room, with a thin layer of damp moss under them. By the middle of December they imbibed moisture sufficiently to swell their bulbs to their natural size; but not wishing to risk them all in that cold place during the winter, I removed the strongest sorts to the Orchideous house, and the more tender to the cool dry place in the Cactus house, reserving some of each kind (to be wholly watered in the seed room) to the amount of about a dozen species, among which were Lælia autumnalis, L. albida, L. furfuracea, Cattleya citrina, and others of similar habits, but which were strangers to me. The moss was kept a little moist all the winter, and the temperature of the room was from thirty-five to forty-five degrees. Those did far better in the seed room than those of the same species put into heat in December. Cattleya citrina appeared to like this treatment better than the rest. A fur of the new species began to dwindle away about the middle of January under this treatment, the place being too cold for them, but if I had kept them in the same dry state in which I received them; no cold above the freezing point would have injured them all the winter. When they made the first effort to grow in March and April, I removed them into a brisk heat, and now they have the advance of those which were in heat during the winter, and as soon as their leaves are fully formed, I shall remove them to ripen their growth to the warmest end of the greenhouse. After making a season's growth in this country, I would not, of course, recommend that they should be kept so cool next winter, but merely to give them forty to forty-five degrees of heat, and about the end of the spring, to have them started in a frame if there be no stove at hand. I believe this will be the first notice of plants of this tribe having been subjected to a cold temperature in this country, and I have ample proof that these, and many others, will not do so well, if they are subjected to a heat above fifty or fifty five degrees in winter. Nothing can be more difficult than to bring some of the plants in my list to any state of healthy growth in our excessively-heated Orchideous houses; but treated as greehouse plants, and with a little forcing for six weeks at the end of spring, or whenever they show a disposition to new growth, they seem as easy to manage as the Stanhopeas, or any other free growing sorts. It is only the expence of fuel, and the disagreeableness of very hot and damp houses that could prevent every lover of plants from indulging in this lovely tribe; and if they could be satisfied that there is even a portion of this lovely family that does not require such treatment, it would be an inducement to their extensive cultivation. That such a portion does actually exist, is clear from the following list of Orchideæ which lived last winter at Kingsbury, and began growing in the spring without artificial heat. The same species in the stove did not do so well, and are now unwilling to yield to additional beat.

Lælia autumnalis furfuracea albida Cattleya citrina Oncidium leuchochilum Brasavola glauca (or grandiflora) | Odontoglossum etatum."

Curtis's Botanical Magazine.

Cyrtochilum sp. (C. Russellii Skinner) Epidendrum sp. which looks very much like the Tchomburgkia or Spread Eagle of the Nurscries.

THE ROT IN SHEEP.-Hydrocotyle vulgaris, Drosera rotundifolia, aud Pinguicula valgaris, have been charged with giving the rot to sheep, and probably other plants. The following idea is, perhaps, new; but will it not explain some cases of rot, which could hardly be attributed to a wet situation, such as when sheep have been upon rotting ground but a very short time? The eggs of the Pasciola are very minute and innumerable, and may easily be carried with the bile into the intestines, and thence voided with the dung. In wet fields, they would be spread about, and kept moist, which probably would preserve life; but in dry situations, they would soon be killed, or, if not killed, they would not be scattered upon the grass, to be taken up by the sheep, as they might be in wet places. If they once enter the mouth, they would have no great difficulty in finding their way to the proper spot for their full developement. The Planasia, often said to be picked up by sheep, and to be the Tracciola or Fluke, before it inhabits sheep, is a water animal of quite a different character.—J. D. C. Sowerby, in Gard. Mag.

The Morinas are handsome oriental herbaceous plants, the original species of which, M. persica, was found near Erzeroum, in the valley of the four mills, by Pournefort, during his residence in that town. In one of these mills, says he, we proceeded to name one of the finest genera of plants in the Levant, to which we gave the name of a person, highly estimable for his science and virtue, M. Morin, of the Royal Academy of Science, Doctor of Medicine, of the Faculty of Paris.—Smith in Rees' Cyclopadia.

A new variety of Peach has been raised from a kernel of the Catherine, impregnated by the violette native, by John Prima, Esq., at Birchington, in the Isle of Thanet. By a paper from Alderman Masters, of Canterbury, which was read at the meeting of the Horticultural Society, November 5, 1839, it appears to be a clingstone, with pale-coloured flesh, "very juicy, perfectly melting, and of a delicious flavour. It ripens, somewhat irregularly, during October, and has even remained good till November, thus lengthening the period during which fruit, of the finest quality, may be produced upon the open wall." It is Mr. Masters's intention to propagate this variety extensively, so that, we trust, it will soon become general in fruit gardens.—Proceedings of Hort. Soc. of London.

It may not be generally known, that the Mowing Machine, which is, of course, of recent invention, is in principle and in many respects identical with the Cropping Machine, invented many years ago for cropping cloth, and extensively used in the clothing districts of Yorkshire and Lancashire. The Cropping Machine in question, was invented by the late Rev. Mr. Harmer, many years resident in Sheffield.

As many persons prefer setting the common mouse trap in their gardens when annoyed with vermin, in preference to any other kind. We observed latterly, in an instance when this was practised, that the traps were placed within small wood boxes, for the purpose of keeping the bait of oatmeal or whatever may be used, for this purpose. Being protected from rain, arsenic might be used for this purpose with safety; if the apertures in the box for the admission of vermin were only large enough to admit mice and rats.

The Glycena scinenses, on the wall of the London Horticultural Society's garden, at Chiswick, measures from the extremity of the branches, 192 feet, this is, perhaps, the largest plant in the country.

QUERY.

In what does the disease called canker originate in the melon and cucumber, and what is its most effectual cure, and the mode of applying it?—T. M.

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LII.—SEPTEMBER, 1840.

REMARKS ON THE HARMONY OF NATURE AND EVIDENCE OF DESIGN IN THE WORK OF CREATION.

BY E. F.

(Concluded from No. LI.)

In my last paper, I spoke of the utility of vegetables. It is my present object to make a few brief remarks on their habits and economy, and then I shall conclude.

As to the habits of plants, we find that each is suited, in its constitution, to the situation and climate to which it is indigenous. The plants of the mountains will not thrive in the valleys, neither will those of the latter place upon hills, nor aquatic plants in a dry The intense heat of a tropical sun would soon destroy plants natives of temperate regions, as would the cold of the latter climate equinoctial plants. But as this subject has lately been brought before the readers of the Floricultural Magazine (vide Vol. IV., p. 217), a repetition will be unnecessary; but, perhaps, it may not be amiss to point out the admirable adoption in the structure of succulent plants, to endure the excessive heat of those regions in which they are destined to grow, as it will tend still more to illustrate this subject. The leaves of all plants are furnished with organs called stomata, which are situated upon their upper surface, and enable them to inhale and exhale air, and to evaporate a portion of the moisture absorbed by the roots, thereby preventing the evil consequences which might ensue from an excess of moisture, facilitating and materially tending to convert the food of the plant into sap, and the sap into wood, if it is the nature of the plant to form wood. In some plants, the stomata are large and numerous, which perspire in a great quantity; whilst, in others, they are few and small, the perspiration of which is greatly reduced. To these latter belong succulent plants.

The greatest number of succulent plants grow on the dry cliffs of rocks, with but little earth, exposed to the burning rays of a tropical sun for several months of the year without the possibility of obtaining above the most scanty supply of nutriment from the dry and parched earth. Plants of an ordinary structure, under such circumstances, would be unable to exist, but succulents, and particularly cactuses, to the more fleshy kinds of which the following remarks more especially apply (though, if slightly modified, they are applicable to others), have a special power of resisting drought. During the rainy season, which generally continues for several weeks, the atmosphere which surrounds them is completely saturated with moisture, and the soil in which they grow drenched with ceaseless torrents. At this time they grow with the greatest rapidity, and the myriads of little cavities in their tissue are all gorged with liquid nourishment, so that when the rains are over, and the scorching sun begins again to exercise his tyrannous dominion over these burning regions, the succulents are in robust health, provided with a supply of food sufficient for several months. But this store would be soon exhausted by plants protected only by a thin epidermis, having numerous leaves pierced with countless numbers of stomata, all busily engaged in evaporating: the sap which they contain in the stem would be soon consumed, and the stem would in vain apply to the roots for a fresh supply, as the ground would, in a few weeks, be quite destitute of moisture, and they must of necessity die. This is precisely the case with all those plants, of an ordinary structure, which are the gay companions of the cactuses during the season of rain. Some of which, being annuals, when the drought commences, ripen their seed and die; the roots of others continue in a dormant state till the periodical rain. But the succulent plants have a special means provided them of enduring these hardships; indeed their constitution is so suited to such situations, that had it been their destiny to grow in a more damp and temperate climate, they would have no means of evaporating the superfluous moisture in sufficient quantity; and as the roots would be continually absorbing, death would consequently be the result. They have no real leaves, and the stems are covered with such a thick and tough skin, having but very few, and those very minute, stomata, so that the liquids they contain can only pass in the smallest quantities, and their

reluctance to part with the food which they contain, is said to increase in proportion to the heat and dryness of the air that surrounds them. And the same correspondence is observable between all other plants and their native situations, in different degrees; but it is needless to enlarge, as enough has been already said to shew the fact, and to enable us to perceive somewhat of the Divine wisdom displayed in this part of the creation.

Again, there are many peculiarities possessed by some plants, among which may be mentioned the shutting of the leaves or flowers at the approach of night, or of a shower, as may be observed in the Convolvulus, some species of Crocus, and the Mimosa, the latter of which will even collapse its leaves by the slightest touch; while that singular plant, called Venus' Fly-trap, the Dionæa muscipula of the botanist, is endowed with the power of collapsing its leaves for the purpose of entrapping flies, or other insects, which may come upon them, and which it is enabled to secure by means of ciliæ or hairs, which fringe the margin of the leaf, and cross each other when the latter is closed.

The contrivance observable in nature for the reproduction of species, though modified in a variety of ways in different kinds of plants, is admirably adapted to their habits, and supplies most plants with abundance of seeds. The seeds of some plants are furnished with beautiful plumes like feathers, called the pappus, which being caught by a breeze of wind soars upon the air, and thereby enables the plant to disseminate its seeds to a distance, as may be observed in several plants belonging to the order Compositeæ. Some flowers grow with their face, that is the opening of the cup upwards, while others hang it down. If the pistil and some of the stamens are not of an equal length in the former, they are longer than the pistil, so as the pollen may fall upon the stigma. But in the latter the pistil is the largest, or there is some other beautiful contrivance for the stigma, otherwise when the anthers would burst, the pollen would fall to the ground, and no seed In the Harebell, or Campanula, which is a would be produced. nodding flower, the fructification is extremely curious. examine it, we find the filaments of the stamens to be short, and the stigma situated upon the end of a long style. But as the anthers burst, and the pollen is ripe as soon as the corolla is expanded, and long before the stigma is ready to receive it, a

casual observer would be at a loss to know how the means of reproduction is provided for in such plants; he would imagine, that upon the bursting of the anthers the pollen must fall to the ground, without the possibility of the stigma receiving its fertilizing influence. But let us examine it a little more closely; for we may be well assured that the All-wise Creator has not left any part of nature deficient of means to perform her various functions; we find the style is covered all over, from the ovary to the stigma with numerous stiff hairs, which, as the style lengthens in growing, brushes the pollen from the anthers, and retains it till the stigma is expanded, when, by insects or some other means, it is conveyed to its proper place.

All nature, every object of creation, from the most highly organized to those which are perfectly inorganic, are each fitted to effect some important end; each has its peculiar office, which it performs with the utmost regularity, and contributes its part to the great system; each

"holds a rank Important in the plan of Him who form'd This scale of beings; holds a rank which, lost, Would break the chain, and leave behind a gap Which nature's self would rue."—STILLINGTLERT.

It would be undue presumption; nay, it would be the depth of absurdity to attribute this most harmonious economy to any thing but Divine intelligence; and we are led irresistibly to the conclusion, that at the same time when the Great Creator and Preserver of the Universe governs all the worlds in their motions, he condescends to bestow a portion of his care on the minutest objects, and that, in this respect, greatness and littleness are the same in his sight.

Howe'er the process we pursue,
And, step by step, with anxious view
Explore of each the guiding laws,
The scope, and end, and moving cause.
The's sage experience trace the course,
Oft time of secondary force;
Yet oft, for each gradation fine,
And ever, for the first design
Of ignorance, convict we fall
Back on the primal Cause of all,
And rest on His creative will,
Who all his works with sovereign skill
Idea'd in his perfect mind,
And each, "according to its kind,"
Ordain'd, amid the fertile field,
To spring, to bloom, its "fruit to yield,"
And "in itself its seed" to bear,
And as He order'd, so they were,"—Br. MANY.

The true observer of nature, who endeavours to "look through nature up to nature's God," will find at every step something to admire, and every successive object he contemplates will tend more to exalt his ideas of Divine wisdom. The volume of nature is open, and has the same claims upon the attention of every age and sex, whether rich or poor; it is written, to use the words of Lord Bacon, "in the only language which has gone unto all the ends of the earth, unaffected by the confusion of Babel;" and most important lessons does it teach, when viewed in connexion with the volume of revelation. But the book of nature is an odd volume, and loses a great part of its value when separated from the book of revelation, which is the key; otherwise we

"Find tongues in trees, books in the running brooks, Sermons in stones, and good in every thing."—SHAKESPEARE.

E. F.

Meivod, near Welshpool.

ON THE CULTIVATION OF GREENHOUSE PLANTS.

BY S.

Springelia.—Among a collection of Australian plants, Springelia should not be lost sight of; as although the flowers and foliage are small, yet still there is something about the plant that immediately recommends it to the admirers of interesting Australian plants. To grow them to perfection, use a good rich turfy peat, that contains a good deal of fibre, broken well with the spade, but on no account should it be sifted, as that discards the most essential part, namely, the fibre; a good quantity of sand should be mixed with it, if it does not already contain it. Pot the plants early in spring, taking care to drain well, and not over pot them, they should then be tied neatly to clean neat sticks, and placed in a light and airy part of the greenhouse. Water as often as you see the mould dry in the pots, as they should not, on any occasion, be suffered to droop, as it very often kills them, but even if it do not kill them, they are sure to be seriously injured; in winter never water but when they are perfectly dry, they should not, however, be left to droop, as they are plants that will not bear, at any season of the year, extremes of either wet or drought. They also require to be kept in the greenhouse during summer, and to be shaded for a few hours

each day from the powerful rays of the sun. Cuttings, if managed with care, will root tolerably free. Prepare the cuttings much in the same manner as Heaths; take a forty-eight sized pot, fill onethird of it with drainage, fill the remainder to about one inch or one inch and a half with sandy peat, press it well down, fill the remainder with clean white sand, press it well also, and give the whole a gentle watering. Proceed then to prepare the cuttings, and by the time you have got them prepared, the sand in the pot will be sufficiently soaked to receive them, press the sand in the pot again, and fit a glass to the pot, draw lines across the sand half an inch asunder, then, with a dibber, about as thick as a goose quill, set the cuttings half an inch asunder in the lines, making the sand quite firm about the cuttings; give them a gentle watering, and after they have soaked, place the glasses on them, and plunge them in saw-dust in a cold frame, or they may be plunged in sand or saw-dust in the propagating house without heat; the glasses must be wiped every morning, and a little air given occasionally to dry up damps; and watered when they require it, and regularly shaded from the sun, by care, they will begin to grow in about two months, which, as soon as observed, the glasses must be left off occasionally for about a week, at the end of which time they may be left off entirely. They now will require potting off, which, when doing, turn the ball of earth clean out of the pot, and bruise it asunder between the hands, separate the plants carefully, so as not to injure any of the fibres, pot them in sandy peat in well drained thumb pots, after which place them for about a fortnight in a close frame, till they begin to grow afresh, when they may be inured to the greenhouse, and treated as old plants. Spingelia incarnata is the only species I know. Andersonia Springelioides require the same treatment.

Eutaxia.—Among Australian plants, this is considered a free growing genus; if potted in the same sort of mould as recommended for Springelias, and treated similarly to them, they will grow and flower freely. Cuttings prepared and placed in sand, much in the same manner as Springelias (except having a little more distance between them, as the leaves are larger,) without glasses, and placed in a cold frame, will root freely; they should be attended to and treated as recommended for the foregoing genus. Eutaxia myrtifolia, and pungens, are pretty.

Diosma .- This family contains some beautiful species, D. umbellata, when well grown, is surpassed by few Cape plants, and others of them are equally handsome, though at present they are rather neglected. I have seen some splendid specimens of D. umbellata grown in the largest sized pots, about three feet high and nine in circumference, feathered from the bottom to the top. In the early part of May, the plants are entirely covered with bloom, and emits a most delightful fragrance; to grow them to this perfection, they require, while young, sandy peat, and very little loam, and at each succession potting, a little more loam should be added until the fourth and successive potting, which should be equal part of good turfy peat and loam, and a little saud, well broken with the spade, but not sifted. When the plants get strong, give them a good sized pot, well drained, keep them in the greenhouse perfectly free from other plants; if crowded among other plants, they never will be bushy or healthy, but will be what they are generally treated, as worthless plants. They require to be kept in the house during summer, and shaded as recommended for the Cuttings prepared in the usual manner, preceding genuses. planted in sand, and placed in a cool frame, will root freely. These remarks apply more particularly to D. umbellata, but the other species will succeed equally well under the same treatment. D. umbellata, oppositifolia rubra, ericoides, villosa, latifolia, serratifolia, uniflora, speciosa, onata, alba, pulchella, orbicularis, cordata, imbricata, lanceolata, crenata, and hispida, are a few of the best of this extensive genus.

Lambertia.—I am not acquainted with more than one species of Lambertia, and that is a very pretty plant; the mould that suits it is a turfy peat, and a small quantity of sand. When the plants are young the mould may be sifted, but when they get old it should only be broken with the spade; the plants are best potted early in spring, the pots require to be well drained, and the mould made firm about the roots. They require to be kept in a light and airy part of the greenhouse, at all seasons of the year, and to be shaded a little with the other Australian plants. Slips of the ripened wood, about three inches long, planted in very sandy peat, four or five cuttings, in a forty-eight sized pot, and placed in a very slight heat, will root with difficulty. Layers are the surest way of increasing it; lay the young shoots early in spring, in

sandy peat, having twisted them a little previous to pegging them down, which causes them to emit roots the more freely; in a year or two the layers will be fit to separate, and not before. Lambertia formosa is the only species I know.

S.

(To be continued.)

NOTES BY THE EDITOR.

Sawbridgeworth, August 1st .- We visited Mr. River's Nursery at this place, and the following are some of the memorandums which we made at the time, there being many of the roses still in bloom, such as the Perpetual, Hybrid China, Bourbons, Multifloras, &c. The Comtesse de Lacepede is a beautiful Hybrid China rose of a silvery blush colour. Louis Fries, very prettily spotted or spangled with a lighter colour on a deep purple ground. Charles Louis, in colour dark rose, very full of petal, one of the best of its class, being a Hybrid China, in the same class as the preceding; and also in fine bloom, the New Double Globe Hip, white. Rosa Tricolor superba, one of the Gallicas, struck us as being an exceedingly pretty variety. Pharericus, this is a handsome show rose, and when bloomed early in the season it is of a brilliant red. Rosa Berberifolia Hardii, on standards this is a very pretty variety with small foliage, and having the habit of the Scotch rose, with very slender stems and single yellow flowers, each flower has a deep purple spot at the base of the petal, very distinct and pretty; most desirable as a standard, budded two or three feet high on slender stems. Also two pretty varieties of Bourbon, the White and the Latifolia, the latter is very fine. A variety of China, named Mrs. . Bosanquet, very pretty, and of a French white colour; another of the same variety, the Grandislora, handsome, and might be described as light purple. Bourbon Crimson globe, globular and dark crimson. Queen of Bourbons, flowers of fawn colour. Bouquet de Flore, a rose coloured Bourbon. Perpetual Ferox, light rose colour, very large. Stanwell Perpetual, light blush; this is a very desirable rose, De Nenilly: a handsome rose, and blooms well on its own roots, but is seldom found to flower freely when

anded on standards. The three preceding are perpetuals. Harrisonii; as standards, with annual shoots three and a half to four feet in length, and strong in proportion; some stools of this rose, in another part of the nursery, were covered with hips. gained by fertilizing the flowers. Grevillea alba: this is new from · seed, and raised at Sawbridgeworth. Aurora, a Hybrid China, very pretty, light scarlet and purple. Amongst a bed of seedling roses we observed several new and distinct varieties. One, named Microphylla grandiflora, of a rose colour, and very large. Another Mr. Rivers has named Semperverous minor. Also a variety of musk rose, with small flowers, pale lilac ground, spotted with lighter colours. Also one which he has named Multiflora florabunda. Amongst a large collection of China roses, we noticed Clara Sylvain, a fine white rose. There was pointed out to us three varieties imported from the Continent, under the names as follow: Marshal Soult, Queen Victoria, and Princess Helene. both in habit and in the flowers are these three varieties, that it will matter but little which of the three is selected, either of which will represent the other two. We state this, having seen three imported plants to which these names were attached, and growing in the We also observed a very pretty cherry coloured same bed. variety of perpetual, named Coquette de Montmorency.

Mr. Rivers has a large assortment of pears planted out as specimen plants, many of which are now bearing abundant crops of fruit, amongst which we noticed the following: the Winter Nalis, which, by-the-bye, is by some said to be tender, but here it is loaded with fine fruit. The Beurré Diel, Marie Louise, Bonchretiens, Althorpe, Crasanne, Beurre Rance, Styrian, and others. Amongst his hardy Creepers was one named Glycene sanguined. The operation of budding and grafting appears to be well understood here, and conducted with great success, especially amongst ornamental trees and shrubs. Cedrus Deodora are grafted on the Larch, and Rhododendrons are also grafted so as to root from the ends of the scions; this method of grafting is called here "union grafting," as the scion has two sources from whence to draw nutriment.

Mr. Rivers has obtained, by hybridizing, an exceedingly dark variety of Moss Rose, but which he does not purpose letting out for the present.

South Lincolnshire, July 23.—We attended here at the request of the Council, as one of the judges at the Flower Show, held on the day already named. The shows at this place, as we have previously observed, are not on an extensive scale, but many good things are often exhibited by the neighbouring gentry.

The most admirable feature of this show is, the encouragement . given to cottagers, who show in great numbers, and bring large quantities of excellent vegetables and fruit as well as flowers. competition which Flower Shows induce among gardeners, is, and has been, productive of an amount of good to the science of gardening which it is impossible to estimate. Our attention has been often directed to the subject, and it has led us to reflect on the influence which they have upon all classes of gardeners. The result of an ambition to be successful as an exhibitor, stimulates exertion in the production of superior objects, whether of fruit, flowers, or vegetables, and these displayed at public exhibitions, become objects of admiration and conversation to the visitors; gardeners and amateurs, who are the successful competitors, acquire notoriety and fame in their several spheres, and are thus encouraged and led on to renewed exertion, till those who had felt secure in their pre-eminence, and supposed themselves to be unrivalled in their professional skill, have not unfrequently discovered themselves to be out distanced by the skill and perseverance of those of their neighbours whom they had the least suspected. By this means a select but very powerful influence has often been brought to bear, both on professional gardeners and amateurs, and in some instances, when they themselves were unaware of the fact. We have been a good deal connected with Flower Shows, and have had an opportunity of watching their effects, and feel quite confident that gardening generally owes much of its present prosperity to Flower Shows. Thousands of cottagers who spend much of their time and labour in their gardens, know but little of many of the simple and valuable modes of cultivating the choice and most profitable kinds of vegetables. Much good has already been effected by this means, and no where, that we remember, is it so apparent as at Louth; the Clergy and neighbouring Gentlemen take a lively interest in inducing their poorer neighbours to cultivate their gardens with care and industry, and many competitors in this class have attained to considerable

eminence, in bringing to very great perfection many kinds of superior vegetables and hardy fruits.

Buckingham Palace, August 8 .- Being in the neighbourhood, we visited the gardens belonging to the Palace, and like many parts of the neighbourhood of London, the want of rain is greatly felt; the lawns were brown, and much injured by the drought, also the shrubs and trees, which, in many instances, appeared to be casting off their leaves, as if in the month of October. garden front of the Palace has a south-west aspect, and the garden extends to west and north-west for a considerable distance. is also on the north wing of the Palace, a large, but rather gloomy Conservatory, calculated for the growth of Camellias and Oranges. Lest we be misunderstood when speaking of the garden, it will be well to mention that this garden contains thirty or forty acres, and consists of spacious lawns, with groups of trees, many of them of great magnitude, especially elms. Some of our readers are aware that this garden was altered and improved by Mr, Mann, under the direction of Mr. Acton, at great cost, seven or eight years ago, and it now contains, in addition to many shrubberies and walks, a large piece of ornamental water; the surface of the ground was altered, and in some parts has a very pleasing effect. The garden for the most part contains at present only shrubberies, lawn, trees, &c., but there is a flower garden about to be made during the present autumn, and we were told this was to be commenced and completed during her Majesty's absence from the Palace, which was expected to be about ten weeks, when, it is said, she purposes visiting the northern provinces of the kingdom, and amongst others of her noble subjects, she intends to honour Earl Fitzwilliam with a visit.

A number of exotic and wild fowl, of various kinds, have lately been added to the lake and gardens of Buckingham Palace, and her Majesty, accompanied by Prince Albert, walks in the garden every morning, about eleven o'clock, for the purpose of feeding these fowls. And again in the afternoon, the Royal pair drive out, generally taking the round of the Parks, passing through the Green Park, Hyde Park, and thence to the Regent's Park, entering at the west side, and passing round the outer ring until they reach the straight road leading from Chester Terrace, near the Colosseum; the Royal party almost invariably turn to the right here

84 ON THE CULTIVATION OF CUCUMBERS DURING WINTER.

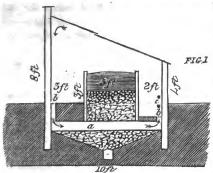
and drive round the inner circle, returning by the Bridge Road and York Gate. In our next number we shall probably have something to say with reference to the Royal Garden which is about to be formed within the inner circle.

EDITOR.

ON THE CULTIVATION OF CUCUMBERS DURING WINTER.

BY T. M.

Having promised in a former Number to forward a paper on the treatment of Cucumbers, with a view to produce winter fruit, I will now endeavour to redeem the pledge there given. The object in view being to obtain fruit during the winter months, we may rationally infer that in order to arrive at a successful result, the following conditions must be more or less rigidly complied with. First, and this is a position of paramount importance, the atmosphere in which their cultivation is attempted should be kept rather arid than otherwise, comparatively with the degree of humidity which is considered desirable at a more favourable season. This condition must, however, be varied, according to the existing state of the weather; as a degree of humidity may be indulged in on clear days which would be dangerous in the more generally foggy and cheerless weather of the season. Co-equal in importance with the state of our artificial atmosphere, as regards humidity, is its temperature. I do not advocate too great an equalization of temperature in forming any artificial climate, such an exactitude not being warranted by any observation of natural causes and their effects on the atmosphere of our globe. The medium temperature in which Cucumbers are growing at this season should average from 659 to 759 by night, and from 709 to 859 by day. A slight variation either above or below this scale will, however, be rather advantageous than otherwise, provided extremes are not indulged in. Air must be admitted at all times when the weather and internal temperature will permit, and water should be used sparingly both at the root and on the foliage, and also as regards the production of atmospheric humidity. With these conditions as the ground-work of their treatment, I am of opinion that Cucumbers may be cultivated very successfully in the kind of structure

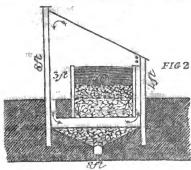


here delineated.—
(Fig. 1). It should be provided with ventilators either in the front and back walls, or the two sashes should be made to open. A trellis, either of wire or light lattice work, should be provided at about a

foot from the glass, on which to train the plants; and the pit after putting in two or three feet of rubble for drainage, should be filled up with suitable soil, in which to plant out the Cucumbers, after raising them in pots near the glass. I would recommend that small air-drains, or shafts, as at (a) should be constructed beneath the pit, at short intervals, communicating with the air of the house by means of a narrow grating, placed the whole length of the front and back walks, close to the exterior walls, as at (b). By these simple means a circulation of the interior air is obtained at all times when the ventilators are closed, on this principle; the air in the vicinity of the hot-water pipes (c), becoming rarified, ascends, and its place is supplied by that immediately beneath it being forced forward by the presence of cold air. The heated air, being specifically lighter than the cold, rises to the highest part of the interior space, in contact with the top sashes, and being cooled in this process, it is, immediately on reaching the highest point, precipitated downwards by coming in contact with the back wall, aided by its acquired gravity, and entering the shaft at (b) is forced through by the continued pressure, and again heated on reaching the locality of the pipes. A continuous circulation of the confined air, as well as a rapid diffusion of heat, are by these means attained, the beneficial effects of which on vegetation are far from being sufficiently recognized. As applicable to our present subject, I regard it as a principle of sterling value and importance. Those who may think this process tedious and expensive, may find a substitute in a well-managed Pine Stove; but as I have already extended

86 ON THE CULTIVATION OF CUCUMBERS DURING WINTER.

these remarks to a considerable length, I must reserve the treatment requisite in such situations for the next Number, just premising that the seed should be sown about the 12th of August, on a slight hot-bed, and the young plants reared as hardy as possible. This applies, as below mentioned, to cases where the fruit is in demand about Christmas. A succession of Cucumbers, by means of common dung beds, may be obtained through September and great part of October, but after this latter period it is attended with much trouble, and frequently with little success. To obviate this in a measure has been my object in this paper, if successful in which I shall consider myself well repaid. To those who may think the structure I have recommended too expensive in its erection, the annexed simplification of the



same principle may be useful (figure 2.) The difficulties and mishaps arising from inclement weather render it needful that the seed should be sown somewhat early, in order that the plants may gain a portion of strength and vigour with which

to bear the hardships they may have to endure. A general rule is to sow about the middle of August to cut fruit at Christmas. The intelligent cultivator will know how to vary this, to produce a succession, or to meet an expected demand. The details of watering and admitting air need not be enlarged upon. I may observe, with reference to the former, that it must always be used with great caution, and in a tepid state: the latter should be eagerly caught at on every opportunity, provided the internal temperature will admit, and preference should be given to the morning for this purpose. The adoption of the air-shafts will however considerably lessen the necessity of admitting fresh air, and therefore in inclement weather will prove an inestimable safeguard against the injurious and fatal effects which often arise from the action of raw air on the tender constitution of the subject of these remarks.

.



[We can strongly recommend the preceding paper, so far as it at present extends, as one of the best we have read; and at this season it will, we have no doubt, be useful to many. As directions for the preparatory arrangements for forcing the Cacumber during Winter we think them admirable; and we trust our Correspondent will not fail to forward us the more detailed directions for culture in time for the next number. In the mean time we may observe, that as we have in our time had rather lengthened experience on this subject, and as our Correspondent has omitted all notice of the point in question, our reference to it may be the more excusable. What we think of importance is, the kind of Cucumber which is attempted to be grown. Some kinds may be cultivated to the greatest perfection during the Winter months, whilst others cannot even be kept alive. The only kind we could ever succeed in growing was the long smooth green; and we have grown this variety, renewing it by cuttings, for upwards of two years.—Ed.]

REFERENCE TO PLATE LIV.

LYHTRUM ROSEUM, var. SUPERBUM, Superb-flowered Lythrum. (Fig. 1.)

NA f. ORD. SALICARIEÆ. CLASS DODECANDRIA MONOGYNIA.

The handsome variety of Lythrum from which we obtained the drawing of this plant, was at the time growing in a border amongst other choice plants in Mr. Lowe's nursery, Clapton. It is a hardy herbaceous species, and is especially deserving of cultivation, owing to the beauty and durability of its flowers. The colour is a deep rose, approaching to scarlet, and the numerous and long spikes of flowers render it an interesting and desirable object. We believe it is quite hardy, and of easy culture, requiring nothing more than a moderately rich and loamy soil. From its appearance we should suppose it to be one of those which would succeed pretty well in a cool and tolerably shady situation.

It appears to have been named from the Greek word, translated black blood, in allusion to the colour of the flowers. The genus is one capable of great improvement, from the ornamental character of its flowers, and the profusion

with which they are produced.

VERBENA SCABRA, rigid Vervain, or Ferfain, its Celtic name. (Fig. 2.)

NAT. ORD. YERBENACEÆ, CLASS DIDYNAMIA ANGIOSPERMIA.

This Verbena is evidently a near relative of V. venosa, a species which in many situations is found hardy. V. scabra is, however, a more ornamental variety; the flowers being of a clearer and more delicately lilac colour, and we think produced more abundantly than the former species. We have grown it and bloomed it in this nursery, and such is our opinion.

VERBENA TRIUMPHANS, Mr. Bunney's Triumphant Vervain. (Fig. 3.)
NAT. ORD. VERBENACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This is an upright variety, and, as we think, one of considerable beauty. The corymbs of flowers are large, and the colour distinct from any one that we know. It probably comes near in colour to a new variety which has been raised in Clapton nursery, and named V. pieta. The latter is probably different in habit, being of a much more diffuse habit, and it is also very handsome.

Were it not that we have scarcely any genus of plants more ornamental than many of the beautiful var of Verbena, especially for turning out into

the flower borders during Summer; were it not for their combined beauty and usefulness, their flowering season being bounded only by the early Spring months and the chilling frosts of Autumn; but for these excellent qualities the Verbena would excite but little interest as individual plants, owing to the almost ceaseless stream of new varieties which are rising up on every side.

The plant from which our drawing of this plant was taken, was kindly sent to us for the purpose by Mr. Bunney, Nurseryman, Kingsland, whose exten-

sive collection contains many ornamental plants.

NOTICES OF NEW PLANTS.

EPIMEDIUM VIOLACEUM, Violet Epimedium.

Bot. Reg.

NAT. ORD. BERBERACEÆ. CLASS TETRANDRIA MONOGYNIA:

This is a pretty little Alpine plant from Japan, the foliage is small, heart shaped, and pointed at the extremities, the flowers are comparatively large, and their general hue of colour is a grayish white, streaked with purple; it is a perennial, and requires the same treatment as other Alpine plants, suffering equally from extremes of wet and dry. Its flowering season is April and May, and it is increased by dividing the roots.

Besides the subject of the present notice, there has been introduced by Dr. Siebold, from the same country, E. macranthum, E. musschianum, and from Constantinople we have E. publigerum, and from Cashmere we have E. elatum, the latter is a tall growing species, two or three feet high, and having dull vellowish or brown flowers.

BRASAVOLA GLAUCA, Glacus Brasqvala.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This is a handsome plant, with white and green coloured flowers. It is a native of Mexico, and besides having been discovered and imported by various other Botanists, it was brought to this country by Deschamps, who imported a large quantity of Orchidea and Cacti for sale several years ago; and relative to this importation Dr. Lindley has quoted the following interesting remarks from Mr. Bateman's splendid work on the Orchidaceæ of Mexico and Guatemala. "This importation was quite unique in its way, and formed a sort of epoch in the history of Orchidomania. A vessel came into port freighted almost exclusively with Epiphytes and Cacti, and such was their abundance, that it was found necessary to engage an extensive suite of apartments for their accommodation at Hungerford market. The plan pursued by M. Deschamps was, to parcel out his plants in small collections, of about twenty species, for which, in the first instance, he asked and obtained very high prices; but the London market being at length exhausted, similar collections were distributed through the provinces, and offered at greatly reduced rates. The author himself purchased in a country town a set of at least twenty kinds, for a sum which, in the Metropolis, he had in vain tendered for only two. In case of any future inundation of Orchidaces, this little fact should be borne in mind." The plant was also discovered by Mr. Skinner, in Guatemala, who says it has a most extraordinary strong aromatic fragrance. As the following is highly interesting to cultivators, we shall take the liberty of quoting it. "At the base of every leaf there is a bud, and from the leaf itself the flower springs, which, in many instances, proves abortive, apparantly owing to the luxuriance of the bud at its base; as a proof of the many fruitless attempts to make this plant flower, one of these buds was removed, which allowed the sap intended for the nourishment of that bud to go to the formation of the flower, and the result was the production of the subject of the present plate. In the following season, the plant was covered with flowers upon the same principle, though not at the expense of its buds, this was done by keeping it dry, and not allowing the buds at the base to grow much until the flower stems were so far advanced as to be out of danger."

BIGNONIA TWEEDIANA, Tweedie's Bignonis.

Bot. Reg.

NAT. ORD. BIGNONIACER. CLASSDIDYNAMIA ANGIOSPERMIA.

This is a greenhouse climber, of considerable beauty, with slender lance shaped foliage, in opposite pairs; the flowers are also large, and of a dull orange, but are very large, and the whole plant slender and graceful. We should consider it a desirable climber. It is a native of Buenos Ayres, imported from thence by the Hon. W. F. Strangeways; it is said to grow in almost any soil, but succeeds the best when turned out into an open border or a Conservatory.

AQUILEGIA GLAUCA, Glaucus Columbine.

Bot Rey

NAT. ORD. RANUNCULACEÆ. CLASS POLYANDRIA PENTAGYNIA.

A very pretty herbaceous plant raised in the Garden of the Horticultural Society, from seeds imported by the East India Company from the Himalaya Mountains and Cashmere. It grows nearly two feet high, and its flowers are deliciously sweet. The blooming season is May and June.

SPIRONEMA FRAGRANS, Sweet-scented Spiralthread. [Bot. Reg. NAT. ORD. COMMELINACE &. CLASS HEXANDRIA MONOGYNIA.

Dr. Lindley says, with respect to this Plant, "This very curious thing is a native of Mexico, whence it was imported by Mr. I.ow. By the searcher after showy plants it will be despised, for it is not more handsome than a rush: by the lover of fragrant plants it will be cherished, for it is delicious; and by him who delights in studying the secret works of Nature it will be preserved with the greatest care, because its thin and delicate tissue allows the hidden motion of its fluids and the subtle texture of its fructifying organs to be watched with ease and pleasure."

CATTLEYA ACLANDIÆ, Lady Acland's Cattleya.

[Bot. Reg:

NAT. ORD. ORCHIDACE .. CLASS GYNANDRIA. MONANDRIA.

This is a very beautiful species. The lip is purple, and the upper parts of the flower is a dull green, but prettily spotted with deep purple. At present it has only produced a single flower, but it is thought when the plant has attained greater strength, the blooms will come in clusters. It is a native of Brazil, and was imported from thence by Lieut. James, of her Majesty's ship Spey.

CEREUS LATIFRONS, Broad-leaved Cereus.

Bot. Mag.

NAT. ORD. CACTEÆ. CLASS ICOSANDRIA, MONOGYNIA.

This is a broad-leaved, or, as the name implies, fronded species, with long whitish flowers, the extremities of the calyx being tinged with rose colour. The flower is rather handsome, but the habit of the plant is by no means prepossessing.

STYLIDIUM FASCICULATUM, Fasciuled-leaved Stylidium. | Bot. Mag.

NAT. OBD. STYLIDIBÆ. CLASS. GYNANDRIA DIANDRIA.

This is a very pretty green-house plant, continuing to bloom for many weeks during Summer. The foliage is narrow, and thickly set upon the slender upright stems, which terminate in large fasculus of white and pink flowers. It has been said to be annual, but we have known it for some years, and have found it perennial.

GESNERIA MOLIS, Soft-leaved Gesneria.

Bot. Mag.

NAT. ORD. GESNERIACE E. CLASS. DIDYNAMIA ANGIOSPERMIA.

A rather handsome species, with orange and red-coloured flowers of moderate size. The foliage is large, hairy, and deeply and equally serrated, and the whole plant is hairy. It is a native of the Caraccas. The habit of its growth resembles that of the T. revirana coccinea, forming at the base scaly roots instead of bulbs.

MALVA PURPURATA, Purple Mallow.

Bot. Mag.

NAT. ORD. MALVACEÆ. CLASS MONADELPHIA POLYANDRIA.

This is a Chilian species, and latterly flowered in the Glasgow Botanic Garden. The foliage has much the appearance of our own Hedge Mallow, of a dull green colour; not large and very light blue. Not very ornamental.

LŒLIA AUTUMNALIS, Autumnal Lælia.

Bot. Mag.

NAT. ORD. ORCHIDE E. CLASS GYNANDRIA MONANDRIA.

This beautiful orchidaceous epiphyte is very closely allied to L. anceps, but Sir W. Hooker considers it botanically distinct. The flowers are streaked with various shades of rose colour and white; this prevails throughout every part of the flower. It has blossomed for the first time in this country in the collection at Woburn.

SACCOLOBIUM DENTICULATUM, Tooth-letted Saccolobium. [Fax. Mag. NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONANDRIA.

This is a small flowering species, and, therefore, not very conspicuous in its blooms, but it is, nevertheless, a most desirable plant, not only on account of the exquisite beauty of its small flowers, but also from its healthy and vigorous habit. With reference to the plant in question, the following remarks are so much to the purpose, we shall give them in Mr. Paxton's own words: "There are not a few of those who even profess to be lovers of nature, to whom the miniature graces with which she so richly studs our earth are as yet a hidden treasure. They stoop not to scrutinize the finer forms of vegetable being, much less to avail themselves of the optician's assistance, by subjecting them to a magnifying process, and hence the more delicate and refined emotions arising from this richly remunerative source, are to them completely unknown. We recommend such a pursuit, however, to all who have taste enough to discern the higher beauties of a flower, and assure them, that from the smallest blossom they may often extract the most exquisite enjoyment."

ACACIA OXYCEDRUS, Sharp Cedar.

Pax. Mag.

NAT. ORD. LEGUMINOSE. CLASS POLYGAMIA MONOECIA.

This is an interesting and beautiful plant, having upright rigid stems, and thickly set, short, and broad leaves, terminating in an acute and spiny point, forming so many stiff and rigid spines. The long yellow brush-like flowers are also numerously set upon the shoots, especially towards the extremity. The subject of the present notice is a native of New Holland, and was introduced so long back as 1824. As a plant of permanent interest and beauty, it has again began to attract notice. Its flowering season is February and March, and is, therefore, a very desirable plant.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

BLETIA SECUNDA.

In the possession of Messrs. Loddiges, but of little beauty.

TRIGONIDIUM RINGENS.

The habit of this plant is rather ornamental, but the flowers of this genus are usually small.

EPIDENDRUM ENCYCLIA.

"This is one of the prettiest of the small species of Epidendrum, and is quite distinct from all hitherto described. Its nearest affinity is with E. papillosum and E. pastoris."

SARCANTHUS OXYPHILLUS.

"This plant, which has lately been received from Calcutta by several

persons, has flowered in the garden of the Horticultural Society, and proves to be nothing more than a narrow-leaved variety of Sarcanthus rostratus, a species of no beauty, long since introduced by the Horticultural Society from China."

SEDUM MULTICAULE.

A spreading herbaceous plant, with yellow starry flowers. It is a native of the Himalaya mountains, where it appears to be very common, but does not in this country attain more than nine or ten inches in height, even in rich garden soil.

STANHOPIA GRAVEOLENS.

A noble species, with the habit and general appearance of S. saccata, but far handsomer. "Its odour is so powerful, that it communicates itself to the fingers after touching the flowers, and like many other smells, though agreeable in itself, is offensive from its intensity."

APORUM LEONIS.

A native of Sincapore, sent to Messrs. Loddiges by Mr. Cuming, under the name of "Lion's Mouth." It is a plant of no beauty.

CLEISOSTOMA LATIFOLIA.

A vanda-like Orchidaceous plant, introduced by Messrs. Loddiges, nearly related to Maculosum; rather pretty.

EPIDENDRUM AMPHIGLOTTIS.

A native of Trinidad, imported from thence by Messrs. Loddiges; rather pretty, but not very ornamental.

TRIPTILION SPINOSUM.

Said to be an exceedingly beautiful herbaceous plant, with blue flowers.

CHYSIS LÆVIS AND CHYSIS BRACTESCENS.

Both these species have appeared with Mr. Barker, of or near Birmingham.

PINUS FILIFOLIA.

"Seeds of this magnificent new pine have lately been received at the Horticultural Society, from Mr. Hartweg, who collected them on the Volcan del Fnego, in Guatemala. The leaves are larger than in any species previously discovered, and the branches are as stout or stouter than those of Pinus palustens. It is in distribution by the Horticultural Society, but it is feared that it will not prove hardy."

PINUS COULTERI.

Dr. Lindley has noticed this plant, as he states, to correct an error which has become generally received, namely, that P. coulteri is identical with P. macrocarpa, and he is of opinion that there are two distinct plants bearing these respective names. He says the cone of P. coulteri is twice as long as broad, that is, twelve inches by six, and its scales, which are generally directed upwards, have a long, sharp, ovate, or lancet-shaped extremity, which is suddenly narrower, and always perceptibly, often considerably, longer than the compressed base. In Pinus macrocarpa, on the contrary, the cone is rounder, and the scales, which are always recurved, have a shorter extremity, which narrows very gradually, and is usually shorter than the compressed base. In Pinus coulteri, the leaves are shorter and stouter than in the other. Both varieties are remarkable for the hardness and heaviness of their cones. A cone of P. coulteri, in the possession of Mr. Lambert, is found to weigh 3 lbs. 12 ounces, and P. macrocarpa, belonging to the Society, weighs 4lb. The true coulteri is still a desideratum in British gardens.

MISCELLANIES.

ROYAL BOTANICAL SOCIETY OF LONDON, INNER CIRCLE, REGENT'S PARK,-According to the minutes of this Society, the first business meeting was held upwards of two years ago, and when we state that nothing has been done during this time towards the formation of the Garden, it may be thought that much time has been lost, and, to a certain extent, this is quite true, but it ought to be borne in mind, that it is not a Joint Stock Company, embarking in a commercial speculation, with the view of profit; had this been the case, it would have followed as an ordinary result of the common interest of the members or proprietors, that the Society would not only have been fully organized, but all its plans matured and completed long ago. The objects of this Society, however, being professedly scientific, keeping in view at the same time whatever is calculated to induce a taste for pedestrian exercise; it is not, therefore, calculated to call forth the application, energy, and zeal of individual members in its behalf. In the infant state of all Societies of this kind. all the rewards for services must necessarily be gratuities, or at best perspec-tive; and those who know anything of the state of society in London, will not be surprised, when it is stated, that there are comparatively few as individuals, even in this vast Metropolis, who possess the requisite qualifications to organize and establish an institution of this kind. There are few indeed who combine both leisure and knowledge, but fewer still who possess both influence and industry. It requires no ordinary exertion to get up the frame work of a Society like this, including, as it does, in the list of its members, many of the Nobility and several of the Royal Family, viz, the Duchess of Kent, the Dukes of Sussex and Cambridge, all of whom have either purchased the privilege of life members, or have paid the fine as a security for the future payment of their annual subscription.

A Royal Charter has been obtained. The arrangements of lease are nearly completed, and this, with the Charter, having to pass through the Government offices, the delays and hindrances attendant upon which, we believe, none but those acquainted with such proceedings, can be at all aware. We have no wish that this should be considered as an apology for the delay that has occurred, we believe much of it has been unavoidable. Before we had an opportunity of witnessing the proceedings, we were also disposed to censure, for what we thought unnecessary delay. It will be seen by the annexed Report, that the sum which is proposed to be raised is but small, and, although we were urged to have named a much larger amount, we have no doubt whatever, that the additional funds requisite for completing the Garden will be obtained on much better terms. We would by no means advice the Society to involve itself with a large debt, for the purpose of completing the Garden at once, its existence and prosperity is the more likely to be secured by a progressive movement. Circumstances have made it incumbent on us to think a good deal on matters of this kind, and it will be found that there is a restless excitement common to the public mind, which is highly favourable to the progress of public works, and if advantage be taken of this feeling, they will generally pay for the various improvements as they proceed; but the moment that a public work or object is pronounced complete, much of the interest which previously operated in its favour the result of the insatiable thirst for novelty, ceases to exist, and whatever difficulties there may be in raising money for the prosecution of public works during the time they are in progress, these difficulties will be found greatly multiplied when the work has been completed.

With regard to the design referred to, the principal object has been in the preparing of it, to render it as ornamental as possible, believing that this is fully compatible with the promotion of science in the fullest sense of the term; and as the plan will shortly be lithographed and extensively circulated, we may take this opportunity of stating, that we shall be most happy to hear from any practical friend, with remarks on the details, and would only con-

tend for the principal straight walk, an extensive lawn, a large extent of conservatory, and these to be entered by a covered way. For conservatories, we are still inclined to recommend the kind of structure described in a previous number of this Magazine.

With regard to the plan being the joint production of D. Burton, Esq., and ourselves, we think it a most important step for the Society in having been able to secure the influence and valuable services of a gentleman professionally connected as he is with her Majesty's woods, &c., and with most of

the Nobility throughout the kingdom.

We think the situation chosen for this garden so admirable, that it must succeed, even with bad management. This will be better understood when we state that there is at present a large number of persons paying an annual subscription for permission to walk in the ground in its present state, while all that entitles it to the name of a Garden, is one circular and one straight walk crossing the ground, the general appearance of which is by no means inviting.

That our readers may form a better idea of the various prospects and present

condition of the Society, we subjoin the following extracts:-

"This Society is now so far established, the Council having, through the gradual assistance of the public secured the ground in the Regent's Park, obtained a Royal Charter, and, after combating many conflicting opinions, settled upon a highly approved design for laying out the Gardens, feel themselves in a condition to make an application to the members for the purpose of raising a sum sufficient to complete immediately the laying out of the Gardens to such an extent, and in such a manner, as may gain the entire confidence of the well-wishers of the Institution.

The following Resolutions were, therefore, submitted to the consideration of the Fellows and Members. At a Meeting of the Council, July 2nd, present, His Grace the Duke of Norfolk, K.G., E.M., Vice President; the Right Hon. the Earl of Albermarle, Vice-President; Col. Sir Barges Camac, K.C.S., Hyde Clarke, Esq., F.L.S, &c., Fred. John Farre, M.D., F.L.S, &c., J. P. Fearon, Esq., F.G.S., &c., H. T. Hope, Esq., M.P., Vice-President; Col. Rushbrooke, M.P., &c., G. G. Sigmond, M.D., F.S.A., &c., J. De Carle

Sowerby, Esq., F.L.S., &cc.

"On the motion of Henry Thomas Hope, Esq., M.P., seconded by the Duke of Norfolk, it was nnanimously Resolved, that £5000 should be raised for

immediately laying out the Gardens.

"A Committee was accordingly appointed, to consider the best means of effecting this Resolution, consisting of Sir Edward Kerrison, Bart., M.P., Col. Rushbrooke, M.P., H. T. Hope, Esq., M.P., J. P. Fearon, Esq., Hyde Clarke, Esq., and Isaac Lyon Goldsmid, Esq., by whom the following Report was made to the Council, and by them was voce adopted.

"The Committee recommend to the Council as follows :-

"That the proposed sum of £5000 be raised by the issue of Debentures for sums of £100 and £50 each, to such parties as shall be willing to advance such amount for a period of five or seven years, and that such Debentures shall be an interest at the rate of five per Cent. per annum, payable half-yearly.

"That in order to raise a fund for paying the interest on such Debentures, a new class of Subscribers be created at £22s. per annum, and that the number

of these Subscribers shall be limited to two hundred.

"That the fund to be raised from the new class of Subscribers of £2 2s. be strictly set apart for the especial purpose of paying the interest and of form-

ing a sinking fund, in part towards the principal of the Debentures.

"The Committee lastly recommend that the accompanying design for the Gardens and Report of Decimus Burton, Esq., the Architect, and of Mr. Robert Marnock, the Curator of the Gardens of the Society, be printed for circulation among the Members.

(Signed) HENRY THOMAS HOPE, Chairman.

Report of Decimus Burton, Esq., the Architect, and of Mr. Robert Marnock, the Curator, referred to in the Report of the Committee for considering the best means of raising £5000 for the laying out the Gardens:—

"6, Spring Gardens, 15th July, 1840.

"To the Council of the Royal Botanic Society of London.

"My Lords and Gentlemen,

"In accordance with the Resolution of the Council passed on the 2nd inst. we have designed the accompanying Plan for laying out the Gardens in the Regent's Park, and beg leave to submit the following explanatory Report.

"It appears to us a matter of certainty that a Botanic Garden, placed in so favourable a situation, would become a popular place of resort for the higher and middle classes, admitted as at the Zoological Society's Gardens, provided the ground be laid out ornamentally, at the same time with due regard to scientific arrangement; and as regards the suitableness of the site, with reference to the scientific objects of the Society, it may be proper to state, that it is the decided opinion of the Curator, that whilst there are a few tender plants which cannot be brought to perfection in this situation, there is an infinite variety of others abundantly sufficient for all the purposes of science and ornament, and which may be cultivated here with complete success.

"But inasmach as the first as well as annual cost of establishing and maintaining such Garden must necessarily be heavy, and as the fund wherewith to defray these costs will, it is considered, be chiefly derived from visitors to the spot, seeking relaxation and amusement rather than science, to attain permanent success, the Garden must be made attractively ornamental as well as scientifically useful. It should eventually contain a large extent of glass houses, with a continuous covered access from the public road, to form a Winter Garden, the atmosphere of which should be maintained temperate and pure, and in these houses a succession of flowering plants should be exhibited, with the object of giving the opportunity to enjoy a healthful and agreeable pro-

menade in all seasons.

"Varieties of surface should be effected, as well under glass as in the open Garden; excavations should be made for ornamental water, and eminences raised to break the present monotonous level, and whence to obtain views over the beautiful district of the Park, the hills of Hampstead, Highgate, &c, Perhaps there is no other more effectual means of rendering the Garden attractive than by diversifying the surface, and in proportion to the extent of artificial undulation will be the advantages of shelter and aspect afforded for the more successful cultivation of tender plants; so that the more ornamental the ground is made in this respect, the better it will be adapted for the objects of science.

"With permission of the Commissioners of Her Majesty's Woods, &c., trees should at intervals be removed from the present formal belt by which

the circle is walled in.

"The principal entrance to the Garden should be from the south-west, opposite the Bridge road, and from which a broad avenue-walk should lead directly to the Conservatory or Winter Garden, and which should be placed on terraces at the opposite extremity of the Garden, in order to give length and effect to this avenue, which should be skirted on each side with lawns and groups of ornamental trees, and terminated with flower-borders, vases, fountains, &c., in and about the Conservatory.

"It would be convenient to have an exit gate opposite the road leading to Chester Terrace (constructed on the principle of those at the Zoological Society's Gardens), and also one to admit parties here to the Winter Garden with

check-tickets obtained at the principal gate.

"As the Society will be restricted from using water from the present reservoir, and as there is no other supply at present in the Garden, it will be advisable to sink a well, and to erect a steam engine and cast-iron tanks; the latter should be elevated on earthen mounds.

"The first cost of the well, the steam-engine, and tanks would most likely not exceed £1800, and the annual cost of working the steam-engine would be

about £120.

"The Commissioners of Woods would probably pay the Society for the surplus water, if, after flowing through the fountains and lakes in the Garden, it were carried to the lake in the Park.

"With reference to the question, 'To what extent the plan can be carried

out for a sum not exceeding £5000? it is considered that this sum will not more than suffice for the proper carrying into effect the following works, viz.:

"1. The entrance gates and lodge opposite the Bridge Road, say at a cost of £500.

"2. The principal avenue, with the lawns and shrubberies immediately adjoining.

" 3. About one half of the walks.

"4. The enclosure bank (and which should be irregular as to height and width, and planted or turfed at intervals, as it may be desirable to admit or exclude views).

" 5. The drainage.

*6. A portion of the works required in excavation for the ponds, and in forming hills to give a variety of surface to the Garden.

"7. The preparation of the plots of ground designed for scientific purposes.

8. The sowing with grass-seeds, to form temporary lawns, those parts of

the Garden which cannot be at first completed.

"If the sum necessary for obtaining a supply of water from the deep spring cannot now be raised, it will be advisable to make an arrangement with the West Middlesex Water-work's Company for such supply only as is absolutely necessary for watering the Plants and Lawns, and to defer the formation of the Fonntains, Ponds, &c., until other arrangements can be made.

"It is particularly desirable that the ground should be cleared of perennial weeds this autumn, because, unless this be attended to, either the laying out of the Garden must be deferred for another year, or the earth will be laid down full of weeds as it now is, which would occasion an inconvenience and future expense to the Society, the amount of which it would not be easy to

calculate.

"If the formation of the Garden be commenced immediately, the principal avenue or straight walk with the Grass Lawns and Ground, designed for the medical and other scientific arrangements of Plants, with part of the smaller walks, might be completed by the month of May next, so that a large portion of the Garden might then be in a state of forwardness, and fit for the admission of Subscribers and the Public.

"It has been thought premature at this time to propose plans for Lecturerooms or Museum, the site for which, however, should be near the Eastern' Lodge, as well as, perhaps, a Library, and Refreshment rooms, the fund for establishing which may probably, without injury to the objects of the Society.

be derived from another source.

"We beg to conclude, by requesting that the Plan and the Report may be considered as intended to afford explanation of our general ideas on the subject. We trust that they will prove sufficient for the immediate purpose, and that the Council may so far approve the principle on which we have proceeded in preparing these documents, as to require from us further details, with a view of prosecuting works to establish an Institution which may doubtless, if judiciously managed, be made to advance the objects of Science, to afford a delightful source of health and recreation to the public, and at the same time to remunerate its Projectors.

"We have the honour to be, my Lords and Gentlemen,

"Your most obedient and humble Servants,

"DECIMUS BURTON.
"ROBERT MARNOCK."

J. D. C. SOWERBY, Secretary.

Offices, 49, Pall Mall, August 1, 1840.

It is undoubtedly a very remarkable phenomenon that the earth when dng to the depth of eight or ten feet, or more, produces many sorts of plants, provided it is advantageously exposed to the sun; but what is more extraordinary is, that this new vegetation frequently affords plants of kinds which have never been remarked in the country. It is natural to ask, whence came these plants? Can it be admitted that the seeds of those new plants were coatained in the several kinds of earth? But could all these seeds, which had

been perhaps above three thousand years under ground, without having ever be en exposed to the action of the sun, have preserved the power of generating. If we strew ashes on high and arid heaths, we shall see some time afterwards clover and vetches growing there, though these two plants had never before been seen on these places. Shall we believe that the seeds of the clover and vetches were in the ground, and only waited for a stimulus to germinate? But how did the seeds come there? We know that high and arid heaths. never produce clover; it cannot, therefore, be considered as proceeding from a plant which formerly grew there. But even did we admit the possibility that these kinds of earth may contain clover-seed, this opinion cannot be maintained in some parts of East Friesland, where wild clover is made to grow by strewing pearl ashes on peat marshes.—Gurdener's Magazine.

VICTORIA REGIA.—Our readers will be glad to know that living plants of this vegetable prodigy have reached Demerara in safety, and that they may soon be expected in England, Mr. Schomburgk having taken measures to insure their speedy arrival. That they will prove as capable of cultivation as other tropical plants of the Nymphæceous order, cannot be doubted; but it is also probable that it will be absolutely indispensable to their health, that the water in which they are grown should be treated artificially, so as to insure for their roots a temperature to which they are naturally exposed, and which cannot be estimated at less than eighty degrees during the season of growth.

THE PERFECTION OF A DAHLIA - The Bloom .- 1. It should be perfectly circular, and between half and two thirds of a ball .- 2. The petals should be stiff and thick, rounded at the end, perfectly free from notch, or serrature, or roughness of any kind .- 3. The petals should be regularly laid and alternate, like the scales of a fish, whether cupped or reflexed, but cupped flowers are always the most bright.-4. There should not be more of the petal shown lengthways than half of the width of the end, that is, the ends of the next row should reach within half the breadth of a petal, the end of the row under it .-5. No portion of the under side of the petal should be drawn in front; in other words, it should not be so much quilled as to exhibit any portion turned quite over .- 6. The petals should be so true as to form circles to the centre, and the circles formed by the ends of the petals should become narrower as they approach the centre, because the petals themselves become narrower.—7. The centre should be not only close, but symmetrical, formed by a regular and compact mass of unbloomed petals, covering each other to the cone, the same colour as the rest of the flower, and perfectly free from any scale or confusion. -8. It should not be more than five inches nor less than three inches and a half diameter, and between these points size stands for nothing, except in judging of the growth of the same variety, in which, if coarseness does not accompany size, the larger one would be best, if in all other points equal .- 9. A good dahlia, like "a good horse, cannot be a bad colour:" this is very well expressed, but it means only that so essential and so rare are combinations of the other good qualities in a flower, that colour is thrown into the back ground altogether. However, if white, it should be pure; if edged, the edge should be regular and decided; if mottled, it should be distinct; if shaded, it should be bright; if any self colour, it should be dense, as if the flower were formed with coloured material, and not as if it were a white flower dyed .- The Plant, -10. In the plant, the desiderata are shrubby habit, three to five feet at most, flowers well out of the foliage, long foot-stalks, with only one bud to each, abundant blooming and fine opening, without trick, or shading, or any artificial means.—A Stand.—11. The desiderata in a stand or collection are, contrast and variety, which gives brilliancy, uniformity which pleases the eye, regularity of size in each row, and the largest at the back, the smallest in front.—Absolute Disqualifications.—12. To show an eye or disk open, or an eye unbloomed, or a mutilated petal, or a dead bloom, or a bruised flower .-Glaring Faults.—13. Flimsy petals, pointed petals, patched petals, petals too much quilled that show the underside, petals too narrow to cover each other well, petals which do not open uniformly round the centre, petals too long, petals irregular in size and situation, petals confused, and over-bloomed flowers .- From Glenny's Florists' Annual.

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LIII .- OCTOBER, 1840,

ON THE PANSY.

BY AN ADMIRER OF THE PANSY.

I perceive you have made some extracts in the last number of your Magazine on the cultivation of the Pansy. The following is my mode of treating this favourite plant; and, although perhaps not superior to the method there described, it may be useful to some, who may prefer and adopt it. In the first place, my soil is a heavy loam, on a cold subsoil of clay; the beds are prepared in open quarters, in situations fully exposed to the sun, the ground is dug over a good spit deep, mixing a quantity of rotten dung along with the earth as it is turned over, the beds are then formed, and partially levelled; this done, I open about a spit in width and eight or nine inches deep, this I fill with well decomposed stable manure, firmly trodden down, being about six or seven inches in depth. On this I return about four or five inches of the best of the loam in which the plants are placed; in planting, I have always found, that by putting a little preparation of better soil immediately round the roots, will repay the trouble, as the plants strike off at once, when, in some instances, when treated otherwise, that is, when planted in the common soil, they have been much longer before commencing to grow. With regard to the placing the manure at some distance from the roots of the plants, I know not why, but I have proved, to my own satisfaction, that it is attended with benefit to the plants, which I have found to do much better in this way than in any other. They appear not to be at first able to bear to have their roots placed in immediate contact with the stimulating manure. I water frequently, being careful at all times to guard against watering over the leaves, except when the ground is cool, and this is seldom the case, excepting late in the evening and very early in the morning. I propagate at all seasons, from early in spring till late in the autumn, and during Midsummer; I always succeed the best with my cuttings in a moderately sheltered situation, but without frames or hand glasses. Those plants which I wish to preserve over the winter in the borders, I plant in beds, and in rows nine inches apart from row to row, and about four inches from plant to plant in the row; for this object I choose a sheltered part of a south border. I do not render the border particularly rich for this purpose, but prepare the soil light and sandy. It is my practice to pot into small sixteens a quantity of the choicest sorts, and keep them in a cold frame; in this way I have an early bloom in pots, and I afterwards turn them out into my borders. I have never found the same plants to produce more than one good flush of bloom. They continue to bloom for many months, and it might be for years, but the flowers become small, and the colours fly and change. I may, at some future time, send you a few remarks on the raising of Pansies.

AN ADMIRER OF THE PANSY.

ON THE DAHLIA.

BY J. WATT.

The growth of the Dahlia is at this season occupying the attention of thousands, may I, therefore, through your Magazine, recommend to such the great importance of proper staking and thinning of the shoots and branches. I have found, by rather long experience, that unless this be attended to, the blooms will be very little worth; they come small and deformed, indeed, a Dahlia well grown when compared with one treated improperly, would, in ninety-nine cases in every hundred, be taken for another thing: and I am certain that this will go far to account for numbers of new Dahlias that are annually sent out, but which prove, by change of treatment, change of soil, climate, &c., unworthy of cultivation. That this is sufficient to account for all the disappointments that take place in this way, I by no means wish to assert, but that it has a good deal to do with the evil, I am not the less confident. Those who raise seedlings, do, as a matter of course, pay very great attention to whatever has the appearance of being passable as a new variety. The slightest indication of merit, when in the seedling state, will insure its receiving from the raiser a fair trial the following year, it is, therefore, placed in the best possible situation, in the best soil that can be procured, every attention is paid to pruning, no more buds are allowed to remain and expand, than it is likely to produce in the highest perfection, not a leaf, shoot, or bud, more than enough, is allowed to remain on the plant; it is watered, shaded, tied, and watched with an interest, such as none but those who have felt it can describe; such careful and

assiduous attention, it will not, in all probability, receive again while it exists as a variety. There is also much in seasons and local climates with regard to the production of good blooms; some kinds will come well one season and not another, others will bloom well in a certain locality and very differently in another. That the Dahlia is subject to all this uncertainty and change, none will deny who have paid any attention to its cultivation; and those who undertake to patronize and grow it, must prepare themselves to find it much like what I have described. To grow it well, the ground should be frequently watered in dry weather, only one stem allowed to shoot, the branches partially thinned out, and a few of the buds only permitted to remain, so that they do not weaken or injure the blooms by their great number, and above all, the plants should be well and securely staked, not only with one, but several stakes, to preserve the branches from being broken by the wind.

J. WATT.

ON LARGE FLOWERING PLANTS IN TOWN GARDENS.

BY NOVELTY.

I have long been fund of flowers, and all kinds of gardening exercise; and although the scene of my operations in this way is but circumscribed. I have found that a great deal of variety may be produced in a limited space. Mine is what may be termed a town garden, only about a sixth part of an acre; two-thirds of this I have in pleasure ground, and the rest in kitchen garden. The portion devoted to flowers, I have laid down in lawn, with beds cut in the turf. only a few of these that I consider permanent. The others are cut out in small circles principally, and are rather numerously scattered over the whole of the surface. My permanent beds are placed round the edges of the walks, and the temporary ones are more in the centre. In the latter I plant sun-flowers, dahlias, large scarlet geraniums, salvias, petunias, convolvulus major, lophospermum scandens, maurandia Barkleyana, fuchsias, trained as pyramids, as umbrellas, and in various other forms, also hollyhocks. climbing roses, &c.; the latter are permanent plants, but all the others I plant annually into small round beds, which are made with wellprepared manure, loam, sand, &c. In this way I have the most profuse mass of foliage and bloom from Midsummer, and throughout the Autumn, that it is possible to conceive. I pay particular attention to the pruning, training, and staking of my tall plants, for without this my garden would be a wilderness. Seen at a little distance, it appears one mass of flower, and when it is approached, the

lawn widens, and not only affords room for walking, but it appears extensive, compared with the little beds. I have my beds tormed anew annually, and supplied with fresh earth: indeed, the beauty of my flowers depends on this; being large growing kinds, they soon exhaust the soil, and seldom do much good when planted two years in the same bed. It is also of importance to have the earth prepared twelve months before it is required. The plants like new earth, but they do not thrive in such as have been recently dug from the meadow, and the thin surface turf being the only kind worth obtaining. At the close of Autumn, when the plants are removed, I have the earth in the beds well trodden down, and the surface again covered with turf, and in this way it remains through the Winter; whilst the soil intended for the beds of next year is pulverizing and preparing in the compost yard. It is impossible to convey a correct idea, by description, of the singularly interesting appearance which my little garden produces, managed in this way.

Besides the plants which I have enumerated, there are many others equally suitable, which will occur to the mind. I prefer those having soft succulent shoots, because such generally flower more treely, and continue to bloom longer than the generality of woody kinds.

Thus I manage my little garden, which every succeeding year presents an appearance differing from the preceding one.

" NOVELTY."

[This is a style of gardening which, we have no doubt, is what the Author describes it, with regard to variety and beauty. The plan we think admirable, and worthy of imitation by amateurs who take much interest in their garden. There are very few soft-wooded plants, such as geraniums, that cannot be kept with tolerable safety in any dry cellar, where the frost is excluded. They only require to be gradually inured to the situation, allowing the plants to become dormant, and their roots pretty dry in the earth, and kept so, merely giving a little water now and then, to prevent the stems shrivelling too much. It is of no consequence that the plants lose their leaves, so long as the stems can be tolerably well preserved.—ED.]

ON COBŒA SCANDENS. BY A FRIEND TO FLORICULTURE.

As most persons consider the Cobœa scandens an annual plant, and as some may, with this view, intend, as the autumn draws near, to cut it up and throw it away, I would advise them to spare it. If it be in a green house, it will certainly live two years, and be much prettier the second than the first year; or if it be on a south wall, cover the root with cinders, or any other light and similar substance, and it will very likely come up the following season. I would advise those who are partial to flowers, especially ornamental plants for

summer decoration, to grow this beautiful and popular plant; nor is it less beautiful than remarkable for its extraordinary rapid growth. Last year, I grew a plant in my conservatory, which extended right and left nearly a hundred feet, and was covered with beautiful cup-shaped blossoms, which were succeeded by an immense crop of egg-shaped fruit, and this plant was two years old. The soil in which it grew was rather light than otherwise, and during the winter I allowed it to become rather dry.

A FRIEND TO FLORICULTURE.

NOTICE OF GRAVESEND, THE KENT ZOOLOGICAL AND BOTANICAL GARDEN, ETC.

BY THE EDITOR.

The parish of Gravesend is situated twenty-two miles from London, and was built in the year 1513, for the express purpose of defending the river; and when Henry VIII. fortified the coasts of the kingdom, he erected a platform here, one at Wilton, and two others opposite to them, on the Essex coast. The parishes of Gravesend and Wilton, were incorporated in the tenth year of Queen Elizabeth; and are governed by a Mayor, thirteen Jurats (including the Mayor and Deputy), twenty-four Common Councilmen, a Recorder, High Steward, Chamberlain, Town Clerk, and Serjeant at Mace; the Mayor being chosen yearly from among the Jurats, and the Chamberlain from the Common Council. The Manor of Gravesend being in possession of the Abbot of St. Mary-le-Grace, of Tower Hill, and he being willing, as Harris relates, to promote the interest of the town, obtained of King Richard II., a grant to the men of Gravesend and Wilton, of the exclusive privilege of conveying passengers from thence to London, on the condition that they should provide boats especially for this conveyance, and carry each person, "with his bundle," for twopence; or take for the whole boat's fare, four shillings. From twopence, the fare was advanced, in 1737, to sixpence; and upon the boats being decked, custom raised the sum to ninepence, except soldiers, who paid sixpence. Since 1790, the boats being made much more commodious, persons voluntarily gave one shilling; "for," says Pocock, "they know that the limited number appointed by the Act of Parliament will not maintain the owners, since they have built such substantial boats; and," he continues, " on an average, three hundred persons pass and repass this easy and safe ferry every day." At present, the fare by the elegant steam vessels, to and from London, which offer such superior accommodation to the passengers, is one shilling and sixpence in the aft cabin, and one shilling in the fore cabin. During the last season, upwards of 500,000 persons

visited Gravesend. In general, it presents the appearance of a port, the streets nearest the water being by no means elegant; but there are many pleasing exceptions to this observation; and the more recent erections in the outskirts are of a totally different character. In the environs, and especially around Wilton, all is rural, varied and very frequently, delightful. A number of villas, cottages, &c. of the class adapted to such a watering place as this has now become. have been erected, and further improvements are still in contemplation. The soil of this parish is generally rich vegetable mould, lying on a substratum of chalk, which forms a solid rock to an immense depth The air is dry, pure, bracing, and extremely healthy; and the ebb and flow of a river, a mile in breadth, that rises and falls more than twenty feet, must cause the change of a vast column of air, twice in twenty-four hours, however apparently motionless the atmosphere may be; and the deep stratum of chalk on which the soil reposes, for many miles, will not allow the stagnation of any matter to engender noxious vapours. The products of Gravesend are nearly confined to the fine vegetables (particularly asparagus) produced in the vicinity, for the supply of shipping and the London market.

Some of the public objects of note in the neighbourhood, which fell under our notice, we shall endeavour to give a description of below; and shall first notice the Cemetary, recently formed and completed in a very elegant manner, having handsome entrance lodges and gates, and a neat and pretty chapel, with a considerable extent of catacombs, beautifully finished. The ground may be three or four acres in extent, and surrounded with a substantial brick wall, about eight feet in height. The ground is divided into two equal parts, by a central walk, formed in a line from the entrance gate to the chapel, and from thence to the place of entrance to the catacombs, at the opposite extremity of the ground. The ground is ornamented by plantation and lawn. One half of the ground has been consecrated, and is used by the members of the Church of England, while the other half is for the use of Dissenters. This establishment has been open, we believe, about sixteen months, and is situated about a mile from Gravesend.

The only nursery establishment at Gravesend is Mr. Clark's. It combines with Nursery stock a Seed and Kitchen Garden.

The scenery around the neighbourhood of Gravesend is varied and beautiful, especially what is called the Windmill Hill, situated close to the town, the summit of which is much higher than the loftiest buildings, commanding not only a bird's eye view of the town and neighbourhood, but, in clear weather, Highgate, Hampstead, and Shooter's Hill are seen on the one hand, while on the other the shipping is seen at the Nore, a distance of twenty miles.

Gravesend has also, within these two years, added to its attractions what is termed the "Kent Botanical and Zoological Garden," situated close to the Rosherville Pier, Northfleet, and about half a mile West of Gravesend. The Garden is entered through Rustic Lodges, and the first view of the grounds is obtained from a high terrace, taking in at once a large extent of the Garden. Immediately in front of the visitor is a raised terrace, with vases, fountains, &c., at present fitting up under the superintendance of Mr. Austain, of London. From hence are seen the fountains, aviaries, the tunuel through the rock, the sweeping walks, the undulating lawn, the steep and rugged chalk cliffs, the prospect tower, &c. &c.: producing a very favourable impression of the fairy-like scenery of this romantic spot.

In passing from the terrace to the left, the visitor is taken through a tunnel to the menagerie, where, in the rock, extensive and admirably contrived dens are formed.

Farther on, passing, with the chalk cliff on the left, are seen some eagles perching on the projecting eminences of the chalk rocks; and interspersed among the lawns and shrubbery, are the aviaries, and the habitations for the smaller birds and animals. On the summit of a part of this chalk rock, which projects into the garden, is built a prospect tower, measuring, from the base of the rock to its summit 150 feet.

At the further end of the Garden is a piece of water and a labyrinth, and a narrow pathway formed of rude steps leading from the lower part of the Garden to the upper terrace, the latter being divided from the former by the range of rocks, which vary from 60 to 90 feet in height. The Curator, Mr. Macleur, says. "Our collection of trees and shrubs is already good, and during the Winter we expect to have a good collection of plants in the Botanic Ground. A Green-house and Conservatory will eventually be erected; this being all we mean to do in this way at present. The shrubs, trees, and plants of all kinds will be properly named, our object being to blend, as much as may be, amusement with instruction."

The execution and finish of the Ground shows that the Curator, Mr. Macleur, is experienced in this department of Gardening. We were struck with the vigour and health of the plants, many of which had only been planted during the preceding Spring. This may, to a certain extent, be accounted for by the circumstance that the surface of the Garden is not much above the high water mark of the River, so that the roots are kept continually moist and cool.

The Garden has been planned, we believe, by one of the proprietors, and the parts are pretty. Indeed the situation is the most romantic and beautiful of anything we know. In a printed notice

of this garden we find the following description. The Gardens occupy a space of nearly 17 acres, and "are laid out in five classes, viz., Grecian, Botanical, Zoological, Romantic, and Pic Nic."

We believe the Gardens are open to all visitors on the payment of one shilling each. That these Gardens must succeed there can scarcely be a doubt, when the mode of admission and the kind of entertainment is considered; bearing in mind that during the last two years upwards of 500,000 persons have annually visited Gravesend. The garden gate is also within an hundred yards of the Rosherville pier, where hundreds of "pleasure-taking" passengers are daily landed.

[We shall be happy to hear from Mr. Macleur when the ground is a little more complete, as our notice must necessarily be general, owing to the unfinished state of the garden.]

REMARKS ON THE BELFAST BOTANIC GARDEN, AND ON PHYLLOCLADUS, &c.

BY D. D.

Some time ago, I visited the splendid Botanic Gardens at Belfast, in Ireland, and was greatly struck with their imposing appearance. The beautifully curved walk leading to and past the front of the range of plant houses with lawn on each side, bounded on the right by the gay and varied foliage of the trees and shrubs forming the Arboretum, surpassed very far what I had anticipated. The recent erections of greenhouses here adds much to the improved appearance of the garden. They are finished in a very neat and tasty style, and the general aspect of the whole place is greatly altered for the better since I saw it some years ago. It is now in a very flourishing condition, and I understand the funds are in such a state, as to enable the proprietors to look forward to the accomplishment of further improvements. I was shown a plant, a new one, and told it was not in any other Botanic Garden either in England or Ireland. It is named Phyllocladus rhomboidalis, a most singular plant, with leaves I believe it is well known to like some of the Fern tribe. botanists, and is a strong tree in its native country. The leaves are in appearance and texture like some of the New Holland Acacias, with broad and flat frond-like leaves, differing, however, from every Acacia that I have seen, in the subdivison of the leaves of the plant in question. In some instances the leaves are so much divided as to have the appearance of being pinnatifid. It is to me the most singular plant I have seen of a shrubby kind, and when it becomes plentiful it will be a great acquisition to the conservatory and greenhouse. I understand it is scarce, and likely to be some years before it can be said to be in the trade. I believe there are many other good and new plants here; but, not being a sufficient botanist, I dare not attempt to describe any others. My object in writing to you is to draw your attention to this curious-leaved plant, and you may make what use of my remarks you please.

D. D.

[The plant to which our Correspondent refers, is one which attracted a good deal of attention about two years ago. Report first described it as an Arucaria. with divided or branching leaves. It was received at the Belfast Garden, as stated by our Correspondent, from thence it has found its way to Mr. Cunningham's Nursery, Edinburgh, and to the Rev. - Williams, of Hendon. We believe it has been increased with little difficulty, and there has also been another importation of plants by the gentleman who presented the one first given to the Belfast Society. The latter importation contained six plants, but we are not certain that all the six lived, nor are we aware whether Mr. Cunningham obtained his plants from the increase of the first imported plant, or whether they were part of the second importation. Mr. Williams engaged to give the Belfast Society fifty pounds or fifty guineas for his plant. Its botanical affinity is with Salisburia adiantifolia, but still nearer related to the genus Podocarpus. In turning to Loudon's Arboretum et Fruticetum Britannicum we find the following notice of this plant:-" This is a monœecious with small obscure male and female flowers in separate catkins. The fruit resembles that of Taxus, only one species is known (in allusion to the one which we have named above). A branchy tree from forty to fifty feet in height. branches are spreading. The leaves angular, with foliaceous winglike appendages at their base, and varying so much in the manner in which they are cut, as occasionally to appear pinnatifid. At their apex, there are sometimes little leafy appendages, which at length become leaves. The flowers are monœecious. The male and female on different branches and terminal. The leaves appear to be compressed branches, in the same manner as those of Xyiophylla. It is a native of Cape Van Diemen, and only dried specimens have hitherto been introduced." At the time that Mr. Loudon wrote these remarks, he had not been aware that living plants were in the country; indeed, it is probable that the plant had not then reached Ireland.

We may further remark that the proposed range of plant houses at the Belfast Garden, will, when completed, be very splendid. The elevation resembles those in the Sheffield Botanic Garden, having a central conservatory with two wings, and a smaller conservatory at each end finishing the range. The whole length is, however, considerably less than that at Sheffield, the width is also less. The range at Sheffield is three hundred feet long, the end Conservatories are twenty-two feet square, and the flanks or intermediate wings are twenty-four feet wide.— Ed.]

ON THE TREATMENT OF THE CUCUMBER DURING WINTER.

BY T. M.

(Continued from page 87.)

The last number of the Magazine contains some remarks on a kind of structure, which is there recommended as adapted for the growth of Cucumbers, in the winter season. A well regulated pine stove presents a facility to those who consider the erection of a Cucumber-house, too expensive or unnecessary. The following remarks are intended to apply to their treatment in that situation.

About the first or second week in August, prepare a hotbed of nearly spent dung, for a one-light frame in the usual manner; and, having waited a day or two, to allow a slight heat to rise, proceed to sow the Cucumber seed, in pots of light rich earth, and plunge them in the frame. When they have vegetated, pot them singly into 48-sized pots, well drained, and replunge them in a slightly increased heat, as near the glass as possible, that they may not become weak, and etiolated, in their infant state. They require the usual attention in watering, and admitting air, observing, that at this stage of growth, great care is necessary that the healthiness of their constitution be in no ways impaired by any excess or neglect, in supplying these necessary elements. The state of their roots must determine the exact period of their being shifted into 24-size pots, which should be done when the roots begin to abound; and this operation must, if necessary, be repeated according to circumstances, previous to their final removal to, and establishment in the stove. The position they are to occupy there, must now be decided upon, in order that the leading shoots may be trained up to a sufficient height to reach the glass; it being necessary, at this season, that they should be trained as near to the roof as convenient, in order to secure, as much as possible. a due supply of light. The leading shoot being thus under training, and the lateral shoots removed, the plants are to be reared as hardy as possible in the frame, for which purpose a sufficient degree of heat should be imparted to the bed, in order to allow a free admission of air during the day. There they may remain till the beginning of October, when, the roots being in a fit state, they are to be finally planted in large sized pots, or boxes, and placed in the stove, either over the front flue or pipes, or on a shelf against the back wall, the pots or boxes being efficiently drained, and elevated as near the glass as may seem eligible. Having been trained up with a single stem, the plants will only require stopping where they attain the desired height, and the vines (shoots) trained on a trellis near the

glass, the system of stopping to produce fruit bearing laterals, will, of course, be the same as that practised in frames; in general, however, the plants, should be kept rather thin of branches than otherwise, in order that the light, air, and heat, may freely circulate amongst them.

As regards temperature and humidity, the Cucumber must, of course, succumb to the legitimate inhabitants of the stove; a slight adaptation of these may, however, in general be effected; and on the degree in which this is attained to, together with a full exposure to light, and a due supply of pure air, depends the success of this mode of treatment.

Water at the root must be supplied regularly, but at all times with extreme caution and moderation; and the plants should be frequently sprinkled over their leaves, particularly in the mornings and evenings; which, if carefully attended to, together with the humidity which it is requisite to keep up in a well regulated stove, will be found sufficient for the healthy production of Cucumbers.

Plants raised from cuttings are equally adapted for winter cultivation, and are even superior in the estimation of some persons, as being less succulent, and more prolific. The tops of the bearing shoots may be taken off in August, and planted in deep pots, half filled with light rich soil, and plunged in a mild bottom heat; a piece of glass may be laid over the top of the pot, which will serve for a bell-glass, until the cuttings have struck roots, when it must be removed. In about a fortnight they will be rooted sufficiently to bear transplanting into ordinary sized pots, after which their treatment does not differ materially from that of plants raised from seeds.

In conclusion, I would just observe, that the soil they are planted in, whether it be in pots, or in the pit, (a sketch of which was given in the last No.) ought to be constituted chiefly of the turfy surface of the ingredients of which they are composed, and this again should have been in preparation about a twelvemonth previous, (see Vol. 4, page 267).

T. M.

REMARKS ON PRUNING THE WEEPING WILLOW.

BY THE EDITOR.

Being in the country a short time ago, we were particularly struck with the effect produced upon a Weeping Willow that had been recently cut considerably back, in consequence of having attained to a larger size than the situation in which it was placed would allow of. It appears to have been pruned about two years ago, and the larger branches had been cut to within a foot or fifteen inches of the principal stem, and the height of tree, or the height to which it had been

cut, was about twenty feet. It had produced a rapid growth of young pendant shoots, many of which had grown to an unusual length. may now be considered the end of the second year's growth, and the shoots were six or seven feet in length. The whole of the upper part of the stem was quite clothed with very graceful plumes (if we may use the term) of slender shoots and foliage, and had an exceedingly beautiful effect. We mention this, because this tree is one so generally planted, and so justly admired for its graceful habit, and we have no doubt would be more frequently planted than it is, but for the circumstance of its attaining so large a size. This tree will then bear with great impunity to be pruned in any way that circumstances may require. Although few are unaware of this fact, yet experience has often shown us that we sometimes need to be reminded of facts quite as obvious as the one in question. We, therefore, trust that this hint may be of use to some whose Willow Tree or Trees have become too large for their situation.

EDITOR.

REFERENCE TO PLATE LV.

IPOMÆA LEARI. Mr. Lear's Ipomæa.

NAT ORD. CONVOLVULACEÆ. CLASS PENTANDRIA MONOGYNIA.

The subject of this notice is amongst the gayest floral objects that we happen to know; and for the opportunity of giving this figure we are indebted to the kindness of Messrs. Henderson, of Pine-Apple-place, in whose collection it has produced its magnificent and beautiful flowers. At first appearance it might be mistaken for I. rubro cœrulea, to which it bears a striking resemblance in the size and colour of its flowers. But botanically speaking, it is distinct from that species, and chiefly in the following particulars: I. rubro-cœrulea is smooth, whilst I. Leari is covered with oppressed hairs, especially the upper surface of the leaves; moreover the leaves of Leari are frequently divided, whilst rubro-cœrulea are always entire: and further I. rubro cœrulea is a native of Mexico, whilst I Leari is from the Island of Ceylon. It has bloomed in other establishments previously to the one in question, and it would appear to bloom the greater part of the year.

Where circumstances are favourable to supplying it with the climate most congenial to its natural habits, we expect a temperature somewhat intermediate between that of the Stove and Green-house will be found to suit it best during Winter; but any ordinary Green-house will be found perfectly suitable for its cultivation throughout the Summer months; nor do we doubt its attaining high perfection even on a South wall in a warm sheltered situation during the latter period of the year.



TO VIEL Alegorija () .

NOTICES OF NEW PLANTS.

MONACHANTHUS LONGIFOLIUS, long-leaved Monk-flower.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This handsome plant has flowered at the Fence, near Macclesfield, in the garden of Mr. Brocklehurst. It is a native of British Guiana, found there by Mr. Schomburgk. The pseudo bulbs are tall, and covered with the base of the weathered leaves. The foliage is long and flexible, and the flower stems pendent. The gaping hood like flowers are bearded, and of a reddish white and yellow colour. With reference to this genus, Sir William Hooker says, "It is not from any opinion we entertain that the genus Monachanthus is really distinct from Catasetum, that we adopt the former name in opposition to that given by Dr. Lindley, but for the sake of consistency in the work."

There is a natural group of Catasetum, the species of which are destitute of the long setæ on the column, and to which the same Monachanthus has been applied. Mr. Appleby, under whose care this plant bloomed, recommends it to be grown in turfy peat, and which should be broken into small pieces, with the pots well drained.

PASSIFLORA ONYCHINA, Lieut. Sullivan's Passion-flower.

Bot. Mag.

NAT. ORD. PASSIFLORACE E. CLASS MONADELPHIA PENTANDRIA.

This handsome passion flower has been previously noticed in this Magazine, but it is a very pretty stove creeper, and will therefore, bear to be recommended a second time. It is of slender habit, the extremity of the flower being of a dull white colour, and the centre ray of a bright red. It is now cultivated in extensive collections, in various parts of the country, and appears to have recently bloomed in the Glasgow Botanic Garden.

HOTEIA BARBATA, Bearded Hoteia.

Bot. Mag.

NAT. ORD. ROSACEÆ. CLASS ICOSANDRIA DIGYNIA.

(Synonymes Hoteia japonica. Spiræa barbata. S. japonica and S. aruncus, of Thunberge.)

This is a graceful little plant, now not uncommon in collections; it attains the height of about nine inches, and bears spikes of whitish flowers. The name by which this plant is best, and indred generally known, is Spireæ japonica. It is, as stated here, a Japanese plant, from whence the species was introduced by M. Von Siebold, to the gardens in Belgium; from that country, Mr. M'Koy kindly sent it to the Botanic Garden, at Glasgow. Dr. Wallach, however, appears to have the credit of first finding the species in Nepal, Gossain, Than, and Kamaon, and applied to it the name of Barbata, which, on every account is to be preferred to that of Japonica.

CEREUS SPECIOSISSIMUS HYBRIDUS, Splendid Cereus Hybrid variety.

| Bot. Mag.

(Synonymes Cereus Mallisoni. C. Smithii.)

The large scarlet or reddish flowers of this plant, render it a desirable one to cultivate in many respects, it is not only a tolerably free bloomer, but is exceedingly ornamental. It is now too well known to need minute description.

CATASETUM INTEGERRIMUM, Entire-lipped Catasetum.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

The flower spike is stiff, upright, and bearing greenish yellow flowers. The lip of which is entire, much contracted, and of a dark colour within. Sent to Woburn Abbey by Mr. Skinner, having been found by him in Guatemala.

FRANCOA RAMOSA, White.flowered Francoa.

Bot. Mag.

NAT. ORD. FRANCOACEÆ. CLASS OCTANDRIA MONOGYNIA.

(Synon. F. Appendiculata of Don.)

This is a white flowered variety, for such we consider it, having grown it some time. It is a hardy herbaceous plant, growing freely in any common garden soil. Sir William Hooker justly remarks, that "although it is considered by many botanists that there are three species of Francoa, namely, F. appendiculata (Cav.) F. sonchifolia (Cav.) and our present one, yet it appears to us very doubtful if it would not be more correct to consider these varieties of the original." We think much more correct; he farther adds, "our native plants exhibit considerable discrepancies, and certainly in a garden the Francoas are liable to much variation in their leaves, in the colour of their flowers, and in the more or less entire apex of the stigmas.

GALEANDRA BAUERI, Bauer's Casquewort.

Bot: Reg.

NAT. ORD. ORCHIDACEÆ VANDEÆ. CLASS GYNANDRIA MONANDRIA.

The habit of this plant resembles that of a Catasetum, and is recommended to be treated as such; but the structure of the flowers differs entirely from that genus. The colours are purple, and white in the lip, and a dull green in the sepals, &c. The flower-stem rises from the crown of the Pseudo bulb, and the individual blooms are suspended on gracefully pendent foot-stalks. This is a rare plant, one specimen being in the garden of the Horticultural Society, and one with Mr. Barker, of Birmingham, with whom the plant has bloomed.

"Another plant now to be found in several collections, and called Galeandra Baueri, but which is much more branched, and has not yet flowered; it certainly grows better when fixed to a block of wood, than when grown in a pot."

CYNOGLOSSUM LONGIFLORUM, Long-flowered Hound's tongue. | Bot. Reg. NAT. ORD. BORAGINACE E. CLASS PENTANDRIA MONOGYNIA.

"This is a very pretty hardy perennial, growing about a foot and half high; if planted in any good garden soil, and flowering freely from the end of May to the beginning of August."

This is a very pretty herbaceous plant, well worthy the attention of those who cultivate this class of plants.

ALLIUM CŒRULEUM, Blue Leek.

Bot Reg.

NAT. ORD. LILIACE A. CLASS HEXANDRIA MONOGYNIA.

This is another very pretty hardy perennial plant, with bright blue flowers, produced in a globular form, at the top of an upright flower-stalk; large and ornamental. It is a native of Asiatic Russia. The seeds, like all bulbous plants, should be sown in pans, and should not be disturbed before the second season after sowing; during this season they require no care but watering while in a growing state. It has been raised at the Horticultural Society.

PASSIFLORA VERRUCIFERA, Warted Passion Flower.

Bot. Reg.

NAT. ORD. PASSIFLORACE E. CLASS MONADELPHIA PENTANDRIA.

A fine growing greenhouse climber, of moderate beauty. The extremity of the

flowers are white, with a dullish purple colour in the centre. It is nearly allied to P. incarnata and edulis.

Bloomed at Mr. Hatris's, of Kingsbury, obtained at Mr. Colville's Nursery; supposed to be a native of Brazil.

CLEMATIS MONTANA, Montain Clematis.

Bot. Reg.

NAT. ORD. RANUNCULACE E. CLASS POLYANDRIA POLYGINIA.

This is a hardy climbing plant, of rapid growth, with white flowers, admirably adapted for covering arbours. Its flowering season is May. "According to Dr. Royle, Clematis grata, from its fragrance, and C. montana, from the showy nature of its garlands, of numerous white rose like flowers, are the most desirable of the Himalayan species of this charming genus, as ornamental plants. Certainly nothing can well be more beautiful than the latter of which a figure is now given; for in the month of May, or even in April, on the south coast of England it is one mass of the most brilliant snow white blossoms, tinged with a delicate pink."

This is quite a valuable plant, as a hardy creeper; it is now common, and cannot be said to be a very new one, and can, therefore, be the more readily procured. The fragrance of this plant is most delightful.

We believe that in some places it is known by the name of C. fragrans, a very appropriate name.

DENDROBIUM DEVONIANUM, Duke of Devonshire's Dendrobium.

Pax. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

We think this is the most beautiful orchidaceous plant that has yet come under our notice. The habit of the plant is something like D. peirardi, but having longer leaves. It appears to admit of being cultivated in the same way, as there is an engraving in the work in question, representing the plant with its roots tied to a piece of wood, and suspended from the roof of the orchidaceous house. The flowers are large, with the prevailing colour yellow. The sepals are broad and deeply notched; these notches are again adorned with a purple funge:

"This is precisely the plant best adapted to bear the title of that magnificent nobleman, through whose aid it has been discovered. For, if the patrons of floriculture are to be commemorated in flowers, whose merits betoken the degree of support which the individual after whom they are named bestows on the science, it is only meet that one of the most noble should be associated with one of the most lovely that can be selected.

It was discovered by Mr. Gibson, who was at the time employed by his Grace as collector, during his tour over the Khoseea Hills, hanging from the trees at about 4,500 feet above the level of the sea.

This beautiful species is nearly related and very much resembles D. æmeulum.

DELPHINIUM SINENSE VAR. FLORE-PLENO, Chinese Larkspur, Double flowered var.

NAT. ORD. RANUNCULACEÆ. CLASS POLYANDRIA TRYGINIA.

This is a very splendid plant, of the most brilliant blue. The flowers are large and double, and exceedingly beautiful. We cannot quite comprehend the meaning of the remarks so as to understand whether it is described as an annual or perennial. It is said to be in the possession of Messrs. Young, of Epsom, and Messrs, Chandler, of Vauxhall.

RODRIGUEZIA CRISPA, Crisped sweet-scented Rodriguezia. [Bot. Reg. NAT. ORD. ORCHIDACEÆ VANDEÆ. CLASS GYNANDRIA MONANDRIA.

"One of the sweetest plants I know, its fragrance resembling that of primroses. It is an orchidaceous plant from the Organ Mountains of Brazil, and flowered with Messrs. Loddiges in October, 1839. Its singularly crisped flowers, of a dull sea green, bordered with yellow, have an uncommon appearance. Botanically speaking, it is considered very nearly allied to R. suaveolens.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

CATASETUM MONACHANTHUS.

A pretty species, flowered in the Botanic Garden, Glasgow, nearly allied to Monachanthus discolor.

CATASETUM MYANTHUS.

Found by Mr. Gardener, in the province of Ceara, in Brazil, and very nearly the same as Catasetum barbatum, having, however, brighter colours, and larger flowers; also from the Botanic Garden, Glasgow.

ONCIDIUM HUNTIANUM.

Said to be figured in the Botanic Magazine at t. 3806, and the same as O. sanguineum of sertum orchidaceum, t. 27.

ONCIDIUM PACHYPYLLUM.

Botanic Magazine, t. 3807, and the same as O. cavendishianum of Bateman's orchidacem, t. 3.

ZYGOPETALUM AFRICANUM.

Hooker's Botanical Magazine, t. 3812. "This, which was sent to Sir William Hooker, from Woburn, as a Sierra Leone Orchidaceous plant, is certainly American, and in all appearance is a pale variety of Odontoglossum bictoniense."

AUILEGIA FRAGRANS.

A hardy perennial from the north of India. The flowers are sweet scented, and in appearance like A. glauca of this vol. t. 46.

AGUILEGIA PUBIFLORA.

From the same country as the last, much less handsome, nor is it scented like the preceding one.

SARCHOCHILUS UNGUICULATUS.

A native of Manilla. Orchidaceous, and rather pretty.

ANAGALLIS ALTERNIFOLIA.

A pretty herbaceous plant, with trailing shoots, with ovate leaves, and yellow flowers, raised at Carclew, the seat of Sir Charles Lemon, out of some earth from Rio Janeiro. We expect this will be an interesting little plant for baskets and in flower beds, &c.

MAXILLARIA SKINNERI.

This plant has flowered with Sir Charles Lemon, and has much the appearance of M. Aromatica.

PLEUROTHALLIS PACHYGLOSSA.

Dr Lindley says this is the largest flowered species he has yet seen; it is nearly allied to P. fusca and ephemera. Imported by Mr. Barker from Mexico-

HARDENBERGIA DIGITATA.

A Handsome greenhouse twiner, from the Swan River, raised by Mr. Toward, gardener to H. R. H. the Duchess of Gloucester. We are told it will be figured in the present Vol. of the Botanic Magazine.

Hardenbergia is the name proposed by Mr. Bentham, to be given to a group of six species of climbers, which he has separated from the old genus Kennedya. These six species are "all found in extra-tropical Australia; all of them are very much alike in the general appearance and colour of their flowers, and all are highly ornamental from the great profusion of their flowers, when under proper treatment. Next to the Zichyas, they form the handsomest of the groups of which the old Kennedya consisted, and which are still known under that name in our gardens." The flowers are small, of a bluish pink, very numerous, and disposed on many flowered racemes. The plant is named in honour of Frances, Countess of Hardenberg, sister of Baron Charles Von Heugel, of Vienna, "a lady most zealous in the promotion of Botany and Horticulture.—Loudon's Hortus Britannicus.

STANHOPEA WARDII.

"Of this fine species, several fine varieties are now in the gardens, among which an exceedingly handsome one is that named S. Barkerii, without the eye-like spots, and with the exterior part of the lip of a delicate ivory colour. Of this the fragrance is very agreeable, which is more than can be said of S. Wardii itself, and some of the other varieties of which, I now fear, even S. graveolens, No. 125, is one, so many forms have I examined within the last few weeks."

BRACHYCOME IBERIDIFOLIA.

A beautiful little hardy annual, of the composite order, with finely cut leaves, like those of Nigella, raised from the Swan River seeds, by Mrs. Wray, of Cheltenham; the flowers are of the deepest blue.

HIBISCUS AZANZA.

This handsome plant has been raised by Mrs. Wray, of Cheltenham, after whom the plant has been named. It is a greenhouse shrub, with lilac flowers; it is said to be as much as five inches across the flower, and very showy. It is next to Hibiscus Hugelii, but differs from that species in various particulars, and also in the colours of the flowers, which are in Hugelii yellow, with a purple eye.

OXYANTHUS VERSICOLOR.

A native of Cuba, introduced from thence by Messrs. Loddiges. The flowers are sweet-scented, have a tube of four inches in length, which at first is white and gradually changes to pink, and ultimately to rose or crimson.

ANGRÆCUM BILOBUM.

A lovely orchidaceous plant, with long drooping racemes of snow white flowers tipped with pink.

EPIDENDRUM LANCIFOLIUM.

A native of Mexico, imported from thence by Messrs. Loddiges, much like Epidendrum cochleatum.

ONCIDIUM RAMOSUM.

A handsome species, with pale flowers in a branched panicle, upon a scape five feet high.

REVIEWS.

The Pocket Botanical Dictionary, comprising the names, history, and culture of Plants known in Britain, with a full explanation of technical terms, by Joseph Panton, F.L.S., H.S., &c., assisted by Professor Lindley, P. H. D., F.R.S., &c. &c. London: J. Andrews, 167, New Bond-street; and W. S. Orr, and Co., Paternoster-row.

The name of this elegant little volume is appropriate, its size being such as may, without the slightest inconvenience, be carried in the pocket, and used as a reference. Any plant may be found in a few seconds; the arrangement being alphabetical, requires no more time to turn to a name than would be needed to turn to a word in the common dictionary. This is not, of course, the case with other catalogues, however excellent in their arrangement in other respects. The name must first be sought in the index, and reference being made from thence to the body of the work, much time is frequently lost. With much truth and propriety, the author informs us, that the " Pocket Botanical Dictionary" has been prepared solely as an instant resource and standard of cultivation, and for this purpose will be found invaluable to the professors and lovers of Horticulture in all its branches and of every grade. Within its columns will be found all the most important information relative to admired Plants, which its small size and avowed design would admit. With this in his pocket, the possessor or cultivator of plants may perambulate his own garden, visit those of his friends or public establishments, and attend floricultural exhibitions, with the full assurance that if any particularobject engage his attention, he may from it at once derive every fact of interest respecting both it and its congeners which is yet known in this country; and form an idea of the facility or difficulty, and consequent expense attending its conservation. Such is cursorily the prime object of this publication, and the aim of its author. It is a sufficient guarantee that the Botanical nomenclature is as free from error as the nature of the work will admit, when we know that during its progress through the press, it was under the superintendence of Dr. Lindley. Each genera is headed by general instructions for the cultivation of the species, and this will be found a valuable acquisition, as we are told by the author, that "for all the suggestions on culture, we hold ourselves for the most part responsible." As an example of these notes, we give the following on Agaricus, Pelargonium, and the Rose :-

On the Agaricus-Linn, Derived from Agaria, the name of a town in

REVIEWS. 115

Linn, 24, Order 9, Nat. Or. Fungi. A more extensive genus than this is not known in the whole vegetable kingdom. Some species, as the common mushroom, A. campestris, A. vaginatus, &c., are well known for the wholesomeness of the food which is prepared from them. Others, as A. muscarius, A. necator, &c., are very dangerous poisons; indeed, the latter quality exists more or less in so many species, and these resemble those that are wholesome so nearly, as to render it advisable to be exceedingly cautious in the use of any, for the most dreadful effects are well known to have resulted from want of caution in this respect. We shall here briefly notice the cultivation of the common mushroom in houses erected for the purpose, referring the reader for details to Loudon's Encyclopædia of Gardening, where a copious account of the different modes of culture, preparing spawn, formation of houses, &c., is laid down. Collect a sufficient quantity of fresh horse droppings, as free from straw as possible, lay it in an open shed, in a heap or ridge; here it will heat violently, and in consequence should be now and then turned for sweetening; after this has subsided to moderation, it will be in a fit state for forming into a bed. In the process of making the bed, the dung should be put on in small quantities, and beat firmly and equally together, until it is the required size: in this state let it remain until the highest degree of heat to which it is capable of coming is ascertained, which may be readily done by inserting a heat stick, and pressing it with the hand: if not found violent, the spawn may be broken up into pieces of two or three inches square, and put into holes about three inches in depth, by six inches asunder over its surface; after this throw a very small quantity of well broken droppings over the whole. In this state let it remain for two or three weeks, when a loamy soil may be put on about an inch or an inch and a half thick, and gently patted with the spade. If the temperature of the house be kept about sixty or sixty-five degrees, mushrooms may be expected in six weeks. It is not well to water the beds much, particularly when bearing; it is much better to throw a little water over the path and flues, which will both improve the colour and flavour of the mushrooms, without being attended with those bad effects frequently resulting from watering, viz. that of destroying the young stock, and turning brown those already fit for table.

PELARGONIUM L'HERITIER-From pelargos, a stork; the capsules may be fancied to resemble the head and beak of a stork: Linn. 16, Or. 4, Nat. Or. Geraniaceæ. The shrubby kinds of this favourite genus will thrive in any rich soil; loam and decayed leaves will be found a good compost for them. The pots should be well drained with potsherds, and the plants receive plenty of air and water, whilst in a vigorous growing state; cuttings root freely in soil or sand, under a glass; some of the finer and hard wooded kinds will be found easier to increase by cuttings from the roots. The tuberous rooted kinds should be kept quite dry when not in a growing state, and may be increased by small offsets from the roots. No genus is more liable than this to sport into hybrids, by promiscuous impregnation. All the fine varieties which are found in gardens have been produced by artificial hybridization, that is by cutting out the anthers of the plant intended for the female parent before they burst and impregnating the stigmas with the pollen of another. Synonymes: 1. Gera. nium, grenvillea. 2: paustrale. 3: G. capitatum. 4: G. stenopetalum. 5: G. miniatum album. 6: Phymatauthus tricolor.

Rosa.—Linn. From the Celtic rhod, red; in reference to the prevailing colour of the flowers. Linn. 12, Or. 3, Nat. Ord. Rosacea.—The name of this genus carries with it a charm as well for the beauty as the unrivalled fragrance

of its flowers, and it has justly been the theme of writers, from the remotest antiquity, as a favourite and universal object of culture among all civilized nations. The plants vary in size, and the colours are red, white, purple, yellow, striped, or of almost numberless shades and mixtures, from single to semi-double and double. As it would be impossible to give a standard list of the most improved cultivated kinds, owing to the number of superior sorts raised annually from seed, and many of the varieties being annually lost, going out of repute or entirely changing their appearance from time and local circumstances; we would on that account recommend those who wish to form a selection of these popular plants, to resort to the latest and best catalogue of roses now actually in cultivation, such as that of Messrs. Rivers and Son, of Sawbridgeworth, Hertfordshire, which is not only the best as a catalogue, but as containing other particulars worthy of the cultivator's consideration. The rose is propagated by every method capable of being applied to ligneous plants, by seeds for new varieties, for obtaining sweet-briar, and for stocks. The Indian, Chinese, and climbing kinds, by cuttings of the young wood, placed in a gentle heat. The moss, and provence, or cabbage rose, by layers or suckers; also by cuttings of the large fleshy roots, which being planted, and covered with a little light rich earth, will each throw up one or more shoots. This will be found a good and an expeditious mode of obtaining young plants. Budding is chiefly used to produce standard roses, or to increase the number of kinds upon one plant; it is also resorted to to preserve some of the more tender kinds, which languish upon their own roots. Rosa canina, or common dog rose, is the best for budding upon; it is asserted by some cultivators, that all roses flower finer and last longer, by being budded on this stock. The moss and provence kinds are well adapted for forcing in winter and spring; the Chinese, and other tender kinds. for decorating the greenhouse, nearly throughout the year. To keep a succession of flowers of the first-named kinds from Christmas until their natural season of flowering, a quantity should be introduced into the forcing-house every month from the first of October to the first of March; the dung heat at first should not be more than 55 degrees, but it may be gradually raised to 65 or 70 degrees of Fahrenheit. The fruit of R. canina is astringent, and employed in medicine in cases of chronic diarrhæa and other maladies. The various preparations from the flowers are rose water, vinegar of roses, otto, or essence of roses, &c. Synonymes: I. R. hybrida. 2. R. rubiginosa inodora. 3. R. canina caæsia. 4. R. leucantha. 5. R. canina dumetorum. 6. R. parvifolia. 7. R. Fraseriana. 8. R. odorata. 9. R. floribunda. 10. R. laxa. 11. R. Eglanteria. 12. R. platyphylla, R. Roxburghii. 13. R. scabriuscula.

We give these as a specimen of the Synonymes. And, in conclusion, we wish this elegant little volume all the success that its author can desire, believing it to be an acquisition to the floricultural world of no ordinary value.

The Queen of Flowers, or Memoirs of the Rose, second edition, with coloured plates, London: ROBERT TYAS.

We know not that there could be stronger evidence of the rapid improvement which is taking place than in the refinement and taste evinced by the increasing demand and encouragement given for the production of books like the elegant and beautifully little volume before us. The parent who cares for the moral and religious training of his family, will not only find the Queen of Flowers unobjectionable in sentiment, but calculated not less to amuse than to instruct the youthful mind on important truths. The volume is embellished with six figures of roses, very exquisitely coloured, and by the same artist, as we are happy to say, is engaged to execute the plates intended to embellish this Magazine. The letterpress has reference to these, and is written in a popular and pleasing style. We have, for some years, had the privilege of the personal acquaintance and friendship of the author, and feel rejoiced at this opportunity of recommending to our readers a production of his pen, feeling confident that no one can peruse the "Queen of Flowers" without being impressed with some useful moral lesson.

In the preface we are told that "the following letters were written for the gratification and amusement of a beloved female friend, in whose happiness and friendship the writer then felt, and now feels an affectionate interest. His fair correspondent being a person of modest and retired habits, whose taste and disposition led her to prefer the society of Flora in the field and flower garden before the solitude of dissipation in the giddy circles of fashionable life-he was led to believe that the innocent gratification of a large portion of her sex, similarly disposed, might be promoted by the publication of this selection. This hope was the writer's motive, and must be his apology for the presentation of this little volume to the public." Although these letters are principally devoted to the celebration of one particular flower, yet the writer is persuaded that every lover of the rose may derive from their perusal new illustrations of the beauties of the garden, in general many of the incidents in the history of this flower being very interesting, and most of the poetical tributes exceedingly beautiful. author does not claim this merit for himself, and says "I may adopt the sentiments of Montaigne, 'I have gathered a nosegay of flowers, in which there is nothing of my own but the string that ties them."

In the second edition the author doubts whether the form of letters may be thought the most agreeable vehicle for the communication of matter like that whereof this volume treats; but adds, "as, however, the subjects were originally cast in such a mould, and actually addressed to a beloved friend, of whose excellence and the writer's esteem the book was and must remain a sincere memorial, it would have been a heartless task to have broken up the epistolary structure."

As a specimen, we shall give part of "Letter 1."

"MY DEAR ANNE,—In the long friendship which you and I have cherished towards each other, you have had many opportunities of discovering my partiality for that beautiful flower—the Rose. Nor has it been without feelings of pleasure, that I have perceived the affection which you have also manifested for this favourite of the musos. How often, while rambling in the fields or resting

in the garden, have we amused ourselves with anecdotes and poetical quotations about this Queen of Flowers! While the vernal zephyrs seemed to sing to its folded buds:

"Rose! Rose! open thy leaves!

Spring is whispering love to thee.

Rose! Rose! open thy leaves!

Near is the nightingale on the tree."

"I have often had thoughts of collecting my scattered reminiscences on this subject, to form a little olio of sweets, under the title of "Rose Leaves," and which might form a trio with Coleridge's "Sybilline Leaves," and Leigh Hunt's "Foliage;" for the present, however, I have resolved to address my little collection to you, as my dearest friend; not doubting but that you will find them interesting, as, although neither brighter norsweeter for coming from me, yet many of them have a beauty and fragrance which circumstances can neither enhance nor diminish, you may, therefore, expect to receive a letter from me at every convenient opportunity until my memory and my memorandums are exhausted.

"I have often recommended to you the science of botany as an elegant and not unfeminine recreation, indeed the study of flowers seems peculiarly to recommend itself to your sex, for woman herself is represented by our favourite poet as

" A flower of meekness on a stem of grace."

Many of the poetical pieces are exquisitely beautiful and appropriate, and the anecdotes which are interspersed throughout the volume are excellent. The following presents itself, and refers to the author himself some years ago, when in a delicate state of health and labouring under an indisposition which subjected him to a great depression of spirits. "I happened, while walking about my garden, to cast my eyes upon a white rose tree. The delicate appearance of the flowers, and my own previous susceptibility, united to produce some very pensive feelings, which I recorded in the following verses:

"Ah! blushing tints to me less dear—
To me less fragrant than before
They whisper but of hopes that were—
That seem to be no more!

Fair flower of loveliest white! at length,
Though left unpluck'd, I call thee mine;
Faint is thy fragrance as my strength;
My cheek as pale as thine.

A fading leaf of texture frail,
Although I quiver in the blast;
The autumn's breeze—the winter's gale
By me have kindly past.
Secure till his Almighty breath
Who made the creature for his love,
Dissolves the body, and at death

Receives the soul above.

"I shall, my dear Anne, take up the remainder of this letter with brief notices of several varieties of the rose which, thanks to floricultural writers and propagators, are now, with numerous other kinds, coming into common cultivation."

It is with equal confidence and pleasure we recommend "The Queen of Flowers," the amusing and entertaining contents of which will well repay an attentive perusal.

MISCELLANIES.

Having a considerable number of seedling Pansies, and which are now blooming in great variety, we have one which displays, in rather a remarkable manner, the freakish and sportive habits of this popular flower. The plant in question has attained some size, and has produced many blooms; three of these, from the same-branch, were marked with white and bronze streaks in the upper petals, and so similar, that the three could scarcely be distinguished, as varying in any particular. The whole of the other flowers on the plant have their upper petals of a uniform dark velvety colour. It is but la terly that we have discovered this to be the case, supposing that the flowers were produced upon a distinct plant. This is, however, not the case; indeed, so far from this, the same branch on which these flowers have been grown, have also borne the same coloured flowers that are common to the rest of the plant.—ED.

CURIOUS CIRCUMSTANCES CONNECTED WITH OAK TREES - Major Rooke mentions, that in cutting down some trees in the wood of Birkland, of Birchland, in Sherwood Forest, letters, &c., were found within the wood of several oaks, marking the King's reign. In one tree, cut down in 1786, were found J. R., supposed to signify James Rex; and in another W. M. with a crown, for William and Mary; and in a third John Rex, with several marks, something like the old crown in prints of King John; but Major Rooke observes that the crown is not sufficiently made out for him to insist it as a fact. The letters were about one foot within the tree, and about one foot from the centre. Crucifixes, images, &c., have been found in similar situations, enclosed in the like manner. Often dead branches of trees, when small, are thus enclosed and grown over by the parent trunk. Professor Burnet observes, that Queen Anne's and Queen Charlotte's oaks, in Windsor Forest, both of which have had brass plates, with commemorative inscriptions thereon, fixed to them, might be given as further illustrations. Over the edges of these plates, the yearly increasing bark has already made considerable encroachments, and, in due course of time, will progressively enclose the whole. To this process do we owe that more noted and variegated texture of the central part of planks, on which much of the beauty of heart wood depends; for the small branches, knots, and nodes of young trees, which detruded themselves near the ground, being, in progress of growth, broken off or destroyed, their relics or rudiments are in like manner enclosed, and thus buried in the heart of aged trees. Sir John Clerke mentions, that the horn of a large deer was found embedded in the heart of an oak, which was discovered on cutting down the tree, and that it was found fixed in the timber by large iron cramps: it seems, therefore, that it had been first fastened on the outside of the tree, which, in growing afterwards, had enclosed the horn.-Loudon's Arboretum Britannicum.

SIR,—Being a reader of your Magazine from its commencement, myself and other friends here look with interest each month for your observations on anything new and reported as good. In this month's number, we anxiously anticipated one of your notes on the Fuchsia alba, as we had previously heard that one had been exhibited this season at the Chiswick Shows, if so, you must have seen it. I think such a novelty would not have escaped your scrutinizing eye. I am afraid it is the Standisheii which approaches nearer to white than any I have yet seen. If Sir, you would, the first opportunity, through the medium of your useful Magazine, or by letter, set us right on this subject, and if there be such desirable variety as the white, with a description of some of its properties, inform us where it is to be purchased, and at what price, you would, I think, very greatly oblige your readers.

Louth, August 15th, 1840.

[If such a thing as a white Fuchsia was exhibited at any of the three shows held at Chiswick during the present season, it certainly did escape our It might, however, have been exhibited at the second show, which we could not attend, being at the time in the country. We did observe at one of the shows a Fuchsia, with the points of the calyx of a dingy white, and in so far, it might be considered a variety curious in its way; but it could not by any means be considered white, although, perhaps, the nearest approach to white of any we have seen. The general appearance of the plant did not at the time strike us as very imposing; and, amongst the multitude of other objects escaped our notice, so far, at least, as to make any memorandum of it, or ascertain to whom it belonged. That this is the Fnchsia alluded to, we have but little doubt, nor are we much surprised, considering the credulity with which we listen to whatever is reported as new; and that this Fuchsia in passing from one to another, should have actually become white by the time it reached Louth, will be thought no wonder in the present day.-ED.]

SIR,—I should feel greatly obliged to you if you would give to a Reader and Subscriber from the commencement, through your valuable Magazine, your advice and directions on the following plan of building a small greenhouse, four yards by three yards and a half, on the cheapest expense, the slope of the roof to be half slate and glass, heated either by Dr. Arnold's stove, smoke flues, or hotwater pipes. An answer in your October number, so that I shall be able to build one in October, would greatly oblige,

J. C.

Stockport, August, 1840.

P.S. Having seen in a Newspaper an advertisement called "The Gardener's Friend" for preserving the new growth of Fruit, Flowers, and Vegetables from the destructive effects of the various descriptions of Garden Insects, I should like to know what this is. If you would be so kind as to inform your readers, they would, I am sure, take it as a great kindness.

[We shall be glad if any of our friends, who may have noticed the advertisement in question, will give the information asked for.

[For the size of the greenhouse which our Correspondent describes, we have no doubt he will find Dr. Arnott's stove to answer very well. He may obtain one for three or four pounds that will answer his purpose. An open vessel on the top to produce evaporation when required, will do all that either a flue or hot, water would require to do. Some of our readers will perhaps enter on this subject more in detail.—ED.]

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LIV.—NOVEMBER, 1840,

HOW TO CULTIVATE THE HYACINTH.

All the skill and energies of the florist have a prospective direction: he labours to day that he may enjoy hereafter, and his exertions are pursued with reference to the future. And even during this dreary season of the year, he must not allow his attention to be diverted from making provision for the returning spring. If he would enjoy flowers at that season, he must plant in autumn, for now is the proper time to provide for his Hyacinth beds, and plant as soon as possible. As this bulb developes its rich and elegant blossoms sooner than most other plants, and as I derive much pleasure in the cultivation of this hardy and free-flowering bulb, I shall, from my own observation. state what appears to me, a few of the most essential points necessary to complete success in its cultivation. I shall, however, first state what I hold to be the requisite of a good flower. It should be of a compact pyramidal form, having a strong stem, supporting numerous large bulbs; these should not be flat or hollow, but convex, and full in a horizontal position, having the uppermost one erect. The colours should be clear and bright. Those flowers presenting a contrast of hues in the centre of the ball are most esteemed, and when exhibited as a prize flower, only one stem is allowed to each plant; besides these, there are many other points deemed of greater or less importance, but the preceding properties are generally thought indispensable to first rate flowers.

For planting in the open border, select an airy situation, having a south or south-west aspect, as being most congenial to its growth. The soil should be rich loam, enriched with well decomposed cow or stable manure, with a small portion of night soil, but this must be used very sparingly, and if the compost be well prepared, it should last two years. I never grow my roots in the same ground more than a couple of seasons, and my preparation consists of the following VOL. V.

materials, and in the following proportions—maiden loam, two parts; cow or horse dung, one part; leaf mould, one part; and one part of river sand. In the situation where the beds are to be placed, the natural soil should be removed about fifteen inches in depth, in the bottom should be placed three or four inches of rotten manure, or any decayed vegetable matter, and over this should be placed the compost already described, raising the bed several inches higher than the natural ground. In planting the bulbs, they should be placed at about eight inches asunder, surrounding each bulb with river sand, then the whole should be covered with light sandy earth, four or five inches deep; during very rainy weather, the beds should be hooped over and covered with canvass or matting. I have planted, at various times, from October to the middle of December, and with nearly equal success.

Bulbs intended to be grown and flowered in the house during winter, should be planted in pots, any time during September, in the soil recommended for the beds. The pots should be of the size termed thirty-twos; an oyster shell or piece of broken pot should be placed over the hole in the bottom of the pot, over this should be placed some well rotten cow manure, then the soil filled up to within two inches of the top, the bulb is then placed in the centre, and with a little sand around it, filled to within a quarter of an inch of the crown of the bulb. When the whole are potted, they should be placed in the open ground, and covered about six or nine inches with garden soil, or any other light earth, for about a month, after which they may be taken up, the pots well washed, a little fresh soil placed over the surface, and exposed to as much sun and light as possible. By this treatment my Hyacinths generally bloom in great perfection. Van. Thol. Tulips, Jonquils, Narcissus, &c., will thrive in the same soil and with the same treatment.

Hyacinths to be grown in glasses, should be placed in them about the middle of November, the bulb should but just reach the water, and be kept in a cellar or some dark place for the first fortnight; at the end of this period the water should be changed, and the glasses brought into the light. In changing the water, which should be done three times a week, about as much salt as would lie upon a shilling should be put into the water each time, this strengthens the plant and flower stalk. When the plants have done blooming, they should be placed out of doors, the pots being laid on their side, to prevent their getting too wet. Any time during June, the roots may be shaken out of the earth and carefully dried; when the roots, leaves, and stems, become quite dry, the bulbs should be wrapped in dry paper, and laid by in drawers until the autumn.

L. F.

[We think the foregoing directions very practical, and likely to answer very well but we should advise the bulbs being planted at a greater depth than that recommended by our Correspondent. We believe they will be found to do better if planted nine inches deep, and in preparing the bed, we should also recommend that the natural soil, unless very good indeed, should be taken out at least two feet deep; the Hyacinth sends its roots deep into the earth, and ought to be provided for in this respect. And in preparing the soil, we should also advise that there should be added to it, at least, three quarters of a pound of common salt to each square yard—ED.]

ON THE BEST MODE OF GROWING THE TULIP, WITH A DESCRIPTION OF THE ESSENTIAL PROPERTIES OF A GOOD FLOWER.

BY Y. K.

To grow the Tulip in high perfection, is, of course, the aim of every florist, and as a suitable soil is one of the most essential requisites, I shall give below a description of what I have long used with very considerable success; and at your request I transmit it to you in order that you may publish it in your Magazine. In sending you this statement, I am aware that it may, and does, differ much from what has been recommended by other growers, but with this I have nothing to do. The following is the kind of compost which I use:-Yellow loam, if heavy, two parts, and if light, three parts. Horse manure, well decomposed, one part, and washed sand one part; to this add, if at hand, some decayed leaf-mould, with a small quantity of soot. I always keep my compost not less than nine, and generally twelve months before using it, and during this time it is frequently turned and mixed. When they are planted in beds, I find the most convenient width to be four feet; the depth to which I fill up my beds with the prepared soil, is about two feet, and the natural soil is, of course, taken out to that depth.

The season which I prefer for planting, is the month of November, and choosing, if possible, dry weather for this purpose. The depth at which I plant them is four inches, and eight inches apart. The bulbs are placed in sand, and then covered with earth. The bed is then raked smoothly over, and no further attention is required till March or April. About this time the buds will begin to make their appearance above ground, and will, therefore, require some protection; for this purpose I erect a temporary awning over the beds, by means of canvass thrown over some frame-work of large hoops, this covering is kept carefully on during hail storms and north-easterly winds. Early in May the flower buds will begin to open, and at this time the beds should be most attentively watched and protected

from the cold night air, and from the sun during the day. I remove the awning altogether as soon as the blooming season is over. When the petals of the flower begin to fall off, I break off the seed capsule; this throws the strength into the bulb. When the stems are nearly withered, the bulbs are taken up, making choice of a cloudy but dry day for this purpose; when lifted, they should be placed on wooden floors, or in boxes, allowing the roots as much sun and air as possible. The bulbs should never be laid on stone or brick floors, as they contract from these so much damp that they are apt to decay. I plant my offsets about three weeks earlier than the parent bulbs, but always in the same soil as the latter.

The Tulip is generally distinguished by its prevailing tints of colour; and the properties of a good flower, are these :- It should be large, and composed of six petals, proceeding horizontally from the base, and turning upwards in the form of a goblet, the three exterior petals being larger than the inner ones, and the edges well rounded, and a little indented in the upper part, the ground colour should be perfectly white or vellow. The various hues, whether stripes, flames, feathers, or blotches, should be either very fine and regular, bold and distinct, or elegantly pencilled. The flame Tulips should branch in a bold and distinct manner, and have a good beam down the centre of the petal.

Y. K.

RANUNCULUS; ITS CULTIVATION, AND THE REQUISITES OF A GOOD FLOWER.

BY L. L.

If the following will meet your views with reference to the Ranunculus, you are at liberty to use it as you please. It is a delicate plant, and requires some skill in its cultivation. Like most of the plants of this class, it is much dependent on the compost in which it is grown; and I have found the following to suit my roots, which are allowed to be grown with at least fair success, viz., strong loam, with about a sixth part of sand. I may mention here, that some of my neighbours grow their roots in lighter soil than mine, but I think with less success than myself. January or February is the time which I prefer for planting. In preparing the beds, the old or natural soil should be taken out about 18 inches deep; then, in the bottom, spread three or four inches of well-decomposed cow dung. The bed is then filled up with the compost already mentioned; and to grow this fastidious plant well, the beds require to be renewed annually, and to be filled up sufficiently high to allow for settling. which it will do two or three inches. In planting, I make my

rows four or five inches apart, and the roots about one and half inch deep. When all the plants have been planted, the beds should be made perfectly smooth. They require the surface of the bed stirring from time to time, and hooping over, and covering with canvass when in full bloom.

When seed is required, the semi-double blooms, with strong stems, well-formed corollas, and rich colours, should be preferred: the seed should not be taken off until it has become quite dry, and the foliage of a brown colour; it will then be fit to rub out.

The Lifting of the Roots.—The roots should be taken up immediately after the foliage has decayed; for if allowed to remain longer in the ground, they not unfrequently commence growing afresh, which very much injures them. When taken up, they should be well cleared from earth, and laid in a dry place, shaded from the sun, but where there is a free circulation of air, so that they may dry gradually. At the time of taking up, the clusters should be carefully examined. Each cluster, although in appearance one root often contains many, which should be then separated, because when they are dry, they become brittle and easily broken. When separated and well dried, they may be put away in bags or boxes, in a dry airy room, until the planting season again return.

Sowing of Seeds.—The best time for this operation is from October to January, in a soil composed of good garden mould, mixed with about a third or a fourth of yellow loam, but without any manure. Large pots or pans should be used, placing at the bottom a good layer of rotten manure. The seeds should be scattered as evenly as possible, and covered to about two-eighths of an inch in thickness. They require to be exposed to the air, except during frosty weather, when they must be protected with frames, or some other covering; and towards the end of April they may be placed in the open air, in a shady situation, keeping them well watered. When the leaves decay, they should be taken up and treated the same as the older roots.

In Lancashire and other places, where this root is cultivated extensively, the following are the properties deemed essential to a good bloom: The size should be two inches in diameter, with the lower tier of petals broad, and the others gradually diminishing in size as they approach the centre, which should be well filled up. The form should be hemispherical, and closely filled with petals, but not crowded. The edges should be perfect, and the colours clear and distinct. The stem should be strong, and not less than eight inches high.

L. L.

[The preceding remarks describe the practice of a Lancashire florist, who is remarkably successful in the cultivation of this flower. We were anxious to give them in the present number, as the season for preparing the beds is now at hand.—Ed.]

SOUTH LONDON FLORICULTURAL SOCIETY'S SHOW AT THE SURREY ZOOLOGICAL GARDENS.

This Society held its last exhibition for the season in these gardens on the 15th September, and the weather being tolerably favourable, there was a numerous attendance of visitors. It is now several years since we visited this garden, and we were struck with the very great change in its appearance. The situation is surrounded with buildings; and owing to the numerous objects which are displayed, the garden is necessarily very much frittered into little parts; shrubberies and trees, continually occurring and intercepting the view of the visitor from extending and resting upon objects at a distance. The eye of the visitor must, therefore, dwell on the objects immediately around him, and in a situation, where the shrubs and trees are more or less affected by the closeness of the situation, and do not, therefore, display all that freshness and pleasing luxuriance usually seen in gardens more under the influence of pure air. We, therefore, think the spirited and enterprising proprietor has not been successful in his effort in disposing of the ground so as to render it as pleasing and attractive as it might have otherwise been. But this is perhaps of little importance, since the public is generally not difficult to please in these matters. Were a garden of this kind to be laid out under our direction, we should think it an imperative duty to place the buildings for the animals, and indeed, erections of every kind near the outer boundary, and leave the interior of the ground as open as possible; by this means, both the air and appearance of the garden would be greatly improved. On the left of the north-east entrance to the garden is a representation of Mount Hecla, very admirably arranged, and the perspective is exceedingly well managed; the projecting rocks and shadows are very effective.

For the display of the various articles brought for competition, there were four tents erected in different parts of the ground. The principal objects of attraction were Dahlias, Pansies, and Roses; there were also several collections of plants, fruit, and vegetables. We did not observe any thing, either novel or particularly worthy of notice, except some very good samples of Pears. A good collection of Heaths from, we suppose, Mr. Jackson, of Kingston. Amongst the single specimens of plants, was a pretty, well grown plant of Lasianthus Russellianus, exhibited by Mr. Banks, of Camberwell; besides this, we have only seen during the present season, one plant of the Lasianthus Russellianus. Paul and Son, of Cheshunt, had a collec-

tion of roses which, for the lateness of the season, we thought remarkably beautiful. There was also a splendid plant of Fuchsia fulgens. This is a most admirable plant for all seasons. Amongst the Dahlias, the yellows were the principal objects of enquiry and attraction. In this colour the two great lions were, of course, the "Defiance" (Cox's,) and Mr. Widnall's "Argo." It would appear that the judges considered the former to be the best Dahlia, as they awarded to that variety the prize offered for the best yellow of any kind. It will often be an exceedingly difficult task to decide between the merits of flowers, such as the Defiance and Argo; as both are superior flowers, and under the same management will necessarily vary. The first prize was awarded to Mr. Catleigh, for the best seedling Dahlia of 1839. This is a very beautiful scarlet variety. The second prize was awarded to Mr. Widnall, for what is generally termed a peach coloured variety, which he calls the "Queen," also a very superior flower. There were besides these, many others possessing very considerable merit, amongst which was the Nottingham flower, raised by Mr. Wingfield. The flower is small, and appeared a little inclined to show the eye: in other respects, it is a beautiful flower, of a middle shade of purple. Amongst the stands of 50, Mountjoy obtained the first prize, and Willmer, of Sunbury, the second. Mr. Willmer's blooms were the largest we have seen this season, and in this respect very much surpassed Mountjoy's, but in other respects, they were not so finely bloomed.

The Pansies were very fair for the season, and some good new varieties, especially of a light colour, were exhibited; and in this class of flowers Mr. May appeared to be the successful competitor. In the stands of 50, Mr. Thompson obtained the first prize, and Mr. May the second. At all exhibitions of fruits, flowers, and vegetables, where the company is numerous and the attractions great, there is a desideratum which, if it could be supplied, would add very much to the comfort, and in the end, prove advantageous to the institutions themselves. We allude to the circumstance that wherever there is any object of particular attraction, no one has the slightest chance of seeing it but such as can make up their minds to be pushed, jostled, and treated in a manner such as ladies, and indeed but few gentlemen, are likely to submit to. At the exhibition in question, we refer especially to the Seedling Dahlias and the Pansies, but more particularly the former, where, notwithstanding our own indifference to these things, we were unable by any effort that we could make, to gain a sight of the flowers, excepting the two or three that were handed to us. The evil of which we complain, operates in two ways in which the Society and the exhibitors are alike concerned. In the first place, the visitors are

disappointed, in not being able to obtain access to inspect those objects which were, in all probability the principal inducement which caused them to be there. The raisers and exhibitors of new and attractive flowers are also injured by the same cause, which disappoints the visitors, in the latter being unable to inspect whatever is new and interesting. If the evil to which we refer were of rare occurrence, we should not think it worthy of notice, but it is one which is more or less felt at almost all exhibitions. It not unfrequently happens that the inconvenience in question is occasioned by the growers themselves, who necessarily feel interested and anxious to remain near their own flowers. We are, nevertheless, convinced that it would be greatly to their interest, at whatever sacrifice to their own inclination and wish not to remain near their flowers. It would be a decided advantage to the winner were his flowers, instead of being locked up by a number of persons who frequently remain nearly the whole time of the exhibition in a crowded manner round that particular part of the table to the entire exclusion of the company; were his flowers freely and equally exposed to the inspection of all the visitors.

ON THE CULTIVATION AND FORCING OF SEA-KALE. BY J. WALTER.

I have just been making arrangements for the forcing of my seakale, which being a valuable vegetable and of great delicacy in winter, and one also which almost every one may grow, I send you the following hints, which are the result of half a century's practice. My beds are in various situations, and I am, therefore, guided in my operations accordingly. But, in order that my remarks may be the more useful. I shall first describe the kind of soil in which the kale is grown. I prepare my beds in the open ground about three feet deep, adding to the common soil, river sand and rotten manure equal parts, laying it on the surface about twelve to eighteen inches thick; this is trenched in and mixed with the common soil, adding about a pound of rock salt to each square vard of the bed. This operation I generally perform in autumn, and plant immediately on the bed being prepared. The plants are put in the bed in patches of three plants in each, and about nine inches from plant to plant. These patches are placed in triangular forms, one row along each side of the bed. This done, the plants are allowed to remain until the weather becomes frosty; the beds are then covered with decayed manure, and a little long litter or straw is thrown over the whole. This is all the attention they require for the season; when in spring the litter and manure is

removed, and the surface of the bed stirred and generally planted with lettuce or sown with radishes, and when these are drawn, the beds are cleared of all weeds and whatever crop has been grown on the bed, and the kale is then allowed to fill the whole space, which they generally do by Midsummer. The roots will have become strong and fit to force the following spring, and with this view the triangular patches may be covered with what is called sea-kale pots, or what is nearly as good, square boxes with moveable tops, to take off or on at pleasure. The whole of the decayed leaves being removed, and the surface of the bed forked in, these pots or boxes are placed over the roots, the tops secured, and the whole covered with a mixture of tree leaves and fresh stable manure; placing this upon the beds several inches above the tops of the pots or boxes. This may be done about Christmas, and the leaves and manure not being of sufficient thickness to acquire a strong fermentation, the kale will be ready to cut before the end of February and through the month of March. It is a practice not unfrequently resorted to of taking two crops from the roots; that is, after having cut the first set of shoots, the covers are again placed upon the roots, and allowed to push from the lateral eyes formed around the top of the root; these are not only very weak and small, and, therefore, of but little value, and what is worse, greatly weaken the roots for next year. When the first crop is, therefore, cut, the top of the pots or boxes should be left open, and, when the whole is cut, the manure should be removed, except a thin covering for the roots, merely to protect them until the growing season returns. About the first of April they should be uncovered, and the roots dug round, and the beds rendered neat and clean. As soon as the roots begin to grow, the crowns, as they are termed, should be thinned out to one or two buds on each. Sea-kale may be grown and forced in a variety of ways; the roots are sometimes lifted and placed in hot beds or warm cellars, shut quite out from the light and covered with boxes or pots. It is also forced in pits prepared for the purpose, having their sides built up with brick in the pigeon-hole manner. A series of beds being formed by the side of each other, the spaces betwixt each bed forms the space for the lining of hot dung, being about two feet wide and three or more feet deep. These beds are covered with wood cases or covers, which fit over the whole of the bed, having part of the roof hinged, and by these opening and shutting at pleasure, the kale is attended to by cutting, &c. when ready.

J. WALTER.

[We are obliged to our countryman for these remarks; they are sound and practical, and, we have no doubt, they will be useful at this season.—ED.]

A FEW REMARKS ON THE WINTER TREATMENT OF CAPE HEATHS.

BY T. Y. Z.

It has long been my business to attend to this beautiful tribe of plants. I, therefore, send you the following remarks, which I trust may be of some service to those of your correspondents who take an interest in these elegant shrubs. I suppose the plants have stood in open air during the summer months, and are now taken into the greenhouse for winter protection, or are placed in frames for the same purpose. In removing them from the open air to the house, they either have, or should have, been turned out of the pots, their roots examined, in case any worms may have obtained access into the pots; they are again returned into the same pots, and removed to the stage of the greenhouse, having had the surface of the pots refreshed with new earth. and the plants staked, and the pots cleaned. They are then arranged in the greenhouse; care should be taken not to place the plants so near as to injure each other; the foliage may be allowed to touch, but nothing more; when crowded together for several months during winter, when but little air can be given them, it is certain to destroy many of the plants, by the foliage falling off from those parts which are in contact. Great caution must be observed in watering the plants during the dull season of the year, and the pots ought never to be watered except when the earth is getting dry. Another important point to be attended to is the giving of air; it is not unusual to see some persons remove their plants from the open air, and allow them very little ventilation; this is a great evil, for nothing is more injurious, to heaths than such treatment. When first taken from the open air, they should not only have a large supply of air on all convenient occasions, but should have the sashes drawn up and down both night and day, except in wet weather, the doors of the house continually open, indeed all the air which it is possible to give them should be allowed. They are now in a much more critical state during the first few weeks after being taken in, than at a later period of the year.

With the best management heaths will sometimes mildew, after having been exposed to the damp and wet weather of autumn, and then placed in the greenhouse, where the air is unavoidably confined. To any plants shewing a disposition to become affected with this malady, a little flour of sulphur may be applied with tolerable success; and this should be attended to with as little delay as possible, as it will, if allowed to remain, soon spread throughout the house.

GARDENING TOUR, WITH REMARKS MADE AT THE VARIOUS PLACES.

BY A PRACTICAL GARDENER,

Who has just left his situation, having served his late employer fourteen years, he will now be glad to engage with any lady or gentleman who may require a scientific and industrious practical gardener.

Wortley Hall, near Sheffield, the seat of Lord Wharncliffe.—The gardens here have acquired notoriety from having formerly been under the care of Mr. Harrison, who published a treatise on fruit trees. The flower garden is divided into parts, laid out in various styles, and may be said to be pretty, and at the time we saw it, in good order, as well as the pleasure ground generally. The straight walk leading to the kitchen garden is lined on each side with Hollyhocks, Dahlias, Coreopsis, Lupins, and Clarkia pulchella, and lastly, and adjoining the walk, Candytuft. These were arranged in lines or rows on each side of the walk, and had a very striking and beautiful effect, each head rising gradually above the other, till backed by the Hollyhocks.

The Kitchen Garden is in fair keeping. I was rather disappointed, supposing I should see some of the remains, at least, of splendid wall trees, having so often heard of Mr. Harrison's Treatise on training, pruning, &c.; but with the exception of some young ones recently planted, and which looked promising, there were none of the old trees that indicated superior treatment, or even ordinary management.

The Gardens here are on the whole respectable in extent and keeping, and under the care of Mr. Law, the gardener, are undergoing improvement in various parts. Pines, grapes, peaches, &c., are forced in the kitchen garden; and in the flower garden there is an orchideous house and conservatory.

Wentworth House, near Rotherham, the seat of Earl Fitzwilliam.

—This is a magnificent place, especially the Park and the House. The gardens, more particularly the kitchen department, is rather extensive, and the kitchen cropping and forcing well managed by Mr. Thompson. There were one or two houses of excellent late grapes. In the flower garden, the principal and deserved attraction are the Orchideous plants, which are growing here in a superior manner to any thing of the kind I had previously seen, especially eight or ten of the Stanhopias, which are large, in vigorous health, and in fine bloom. This department is managed by Mr. Cooper. The pleasure grounds are chiefly remarkable for the fine trees and extensive lawns.

Sheffield Botanic Garden.—This garden having been frequently noticed in this Magazine, it may, with propriety, be passed over,

except that there were three Musas bearing fruit, and at the time ripe, the sorts were M. paradisica, Cavendishi, and sapientum.

Chatsworth, near Bakewell, the Seat of His Grace the Duke of Devonshire .- The kitchen garden is in a low situation, but extensive, and sub-divided by three or more cross walls, which are mostly covered with glass, for the various purposes of forcing. The cropping and management of the whole appeared to be conducted in a superior manner; one thing we especially noticed in the borders of the kitchen garden, some onions which had been raised in boxes in the hot-houses early in spring, and afterwards planted out, were the finest we had ever seen, certainly equal in size to the enormous onions frequently imported and displayed in the shops during winter and autumn; nor was their size the only remarkable feature deserving of notice, they were not only large, but all nearly equal in size. The variety appeared to be the Tripoli, there might be others. In the vineries nothing remarkable was pointed out to us; but the crops, particularly the black and late kinds, were both abundant and beautiful. of the forcing houses were fourteen or fifteen plants of Musa Cavendishi, of various sizes, grown here for the purpose of supplying fruit for the dessert. The pines are numerous, and in excellent condition, not very many in fruit.

The fruit, such as pears, appeared abundant on the walls; and the management of currant and gooseberry trees, which may be properly designated as trees, deserves to be imitated. They are trained with single stems, the gooseberries to the height of three feet, and the currants upwards of four, before the heads commenced; by this means, the fruit is always free from sand, and can be more easily matted and protected, when it is necessary to preserve it beyond the usual season. It is worthy of remark, that in matting these bushes or trees, a hoop is formed round the plant, by which the mat or netting, or whatever else is used, is prevented from touching the leaves and fruit; this is an excellent practice.

The orchideous collection may be nearly twice as numerous here as at Wentworth House; but in large specimens, there are many good ones at both places.

The succulent plants here are both numerous and in excellent condition, and struck me as the most remarkable feature in this garden. Amongst the common kinds I noticed the largest plant of Cereus Jenkinsonia, that I had any where seen. The plants in the ridge and furrow houses, right and left of Mr. Paxton's house, were in high health. Epacris, Heaths, and other hard wooded things, were blooming very beautifully in the west end division.

From here I went to Chatsworth, to view the grounds round the mansion. The hot wall is covered with half hardy plants, many of

.

.

.

•



which were in splendid bloom. Some Fuchsias were remarkably fine and large. In going from this part of the ground to the great conservatory, I passed the cascade on the left, which is to a stranger a highly interesting object. The large conservatory is rapidly proceeding towards completion, no plants are yet introduced, but the soil and borders are being prepared, and a large rustic staircase is nearly finished, by which visitors are enabled to reach an elevated platform, about twenty-five feet in height, which surrounds the house. staircase is formed of blocks of native stone, and some are enormous size, the whole will ultimately be planted with creeping plants, such as Epiphytes and the like, of various varieties. archways for the admission of carriages to drive through the house, are also in course of erection. The Portugal laurels in various parts of the pleasure ground, trained with single stems, to the height of six feet and upwards, resembling orange trees, had a curious and very interesting appearance, I omitted in the proper place to mention the singular appearance presented by the fountain made in the form of a Willow Tree, and placed near the large conservatory. On the southwest front of the Mansion, there is a splendid Italian flower garden, the beds are raised two or three feet above the level of the grass surface, the edges of the beds consist of cleansed stone, beautifully worked, forming handsome scrolls and other devices. The whole of this princely place is evidently conducted in a masterly manner.

(To be Continued.)

REFERENCE TO PLATE LVI.

AGAVE AMERICANA, VAR. VARIEGATED AMERICAN ALOE.

NAT. ORD. AMARYLLIDACE E. HEXANDRIA MONOGYNIA.

The American Aloc, although a very popular plant, is but little known as to its properties and history, and much of what is supposed to be known concerning it, is vague and erromeous; as, for instance, the current opinion that it produces flowers once only in an hundred years. With the view, therefore, of giving an idea of the general appearance of the plant when in bloom, together with such particulars of its habit, uses, &c., as may appear deserving of notice, we paid a visit to St. Margaret's, at Isleworth, the seat of the Marquis of Ailsa, where the plant from which our drawing has been taken is blooming. The noble proprietor of St. Margaret's, kindly informed us that he purchased the plant and another about twenty-five years ago, from the late Mr. Todd, of Twickenham Park; and a variety of plants, about none of which was anything said, he purchased from Mr. Goslin, the Banker. The fellow of the Aloe now in bloom flowered about four years ago and then died. The present plant has not much increased in size, since it came into the Marquis's possession, although for the few last years it has got a little more bulky. Mr. Spare, his Lordship's Gar-

dener, and others, say the plant in question is supposed to be about an hundred and forty years old. It has not been recently put into a fresh tub, but up to within a short time of its blooming, has been kept in a healthy rigorous state.

This Aloe has stood in the open air all the summer, and in that situation the bloom made its appearance, nor was it removed from here until about a fortnight previous to our visit (September 29th), when a temporary apartment was provided for it. This is constructed of wood and glass; there is also a staircase which ascends to a platform, by which the flowers can be easily inspected. It is usual for all the plants of this family to produce short leaves in the centre previous to blooming, and this was the case also with this Aloe. The central leaves were short, and from the centre of these ascended the majestic flower stalk, which is quite erect, as will be seen from our engraving. When the flower-bud first appeared among the leaves, which was on the 10th of June, it is said to have very much resembled a monstrous bud of Asparagus. The stem is now twenty-two feet high, bearing twenty-five panicles of blooms, containing in all 2000 individual flowers. The base of the flower stalk is from five to six inches in diameter, and at the extreme top, one inch. The lateral flower stalks, which are horizontal, are the longest of them about eighteen inches. At the time of our visit, about half the number of the lateral clusters were in full bloom, those on the upper part of the spike had not opened. From the open full blown flowers, a copious discharge of nectar or honey, secreted by the flowers was going on. Such was the extent to which this secretion was discharged, that the leaves of the plant below appeared as if varnished over with some gelatinous substance. The secretion, when tasted, did not appear to be very pure or sweet, probably owing to the lateness of the season, and the declining influence of the sun's rays being unequal to mature fully the juices of the plant. Previous to its blooming, the leaves measured, from the extreme point, 12 feet, but the foliage has now a drooping habit, indicating that it has nearly fulfilled all that nature can require or expect in its present situation and circumstances. We need hardly say that when this plant produces its bloom, the same individual ceases to grow, and continues to live only until its strength and substance has been exhausted in the production and nourishment of its offspring; that is, as soon as the Aloe blooms, there is no further enlargement of the same plant; suckers, or young plants, proceed from the stem, and from amongst the leaves, these take the place of the old plant, and when it is thought desirable to increase and cultivate them, they require to be taken off and placed in pets suited to their size, and treated in the usual way.

It appears from the information thus kindly supplied to us, that this Aloe has scarcely increased in size during the last twenty-five years, and probably very little during the last fifty years. Indeed the treatment which the larger plants of the American Aloe generally receive, will scarcely permit us to expect them to make much progress in growth; for however the smaller plants are managed, those which attain to any size are invariably submitted to the open air during summer, and when the seasons happen to be cold, the plants cannot under any circumstances increase much in bulk; and the greater probability is, that they stand still, so that being thus placed in the open air in summer, and very likely in some dark and shady part of the green-house, or conservatory during winter, it is not, therefore, difficult to understand why the American Aloe should continue to exist, for so many years as they generally do without blooming. The general impression that this plant produces bloom once only in an hundred years, is frequently verified, and the one in question is more likely to be nearly twice that age.

Were the American Aloe submitted to a high temperature during summer, that is, kept in a warm green house, and properly managed, with respect to potting, soil, and watering, we have no doubt but the Aloe would bloom in the course of every four or five years.

The uses of the Aloe are various; and is, of course, differently applied according to the countries in which it is found. It grows wild in the south of Spain and Italy, and there it is also grown as an ornamental plant, and is often placed around the houses of the wealthy. In France, Germany, and other parts of the Continent, it is common, and treated as our greenhouse plants, and as orange trees are in this country. In Algarva, the leaves are employed for scouring pewter, and kitchen utensils; they are sometimes cut into slices and given as food for cattle. The juices of the leaves being expressed, are also used as a substitute for soap, which is efficient alike both in salt water and fresh. The fibrez of the leaves are separated into threads, and used for common purposes, but are not durable when exposed to moisture. In this country, the American Aloe is preserved in ordinary green-houses, or in vaults and cellars during the winter months, and exposed in the open air on terraces, gravel walks, and pleasure grounds, as objects of decoration during the summer; and like the orange tree and the myrtle, their extreme tenacity of life has rendered them, with the latter, equally popular. The leaves of the Aloe, when cut in thin pieces and thoroughly dried, form excellent straps for razors, or other sharp instruments.

There are other species of the Aloe, of which the negroes of the western coast of Africa make ropes and weave nets of the fibrous parts of their leaves. The Hottentots hollow out the stems of one of the kinds, for quivers for their arrows. In Mexico, a variety is grown which serves to make hedges for inclosures, its trunk supplies beams for the roofs of houses, and the leaves are used instead of tiles. From this plant they make their thread, their needles, and various articles of clothing and cordage, and from its juices they manufacture wine and vinegar. Some parts of it they eat, and others they apply in medicine.

NOTICES OF NEW PLANTS.

CALANTHE DISCOLOR, Discoloured Fair Bloom.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This is a bandsome plant, with broad, upright, wavy leaves, and an erect flower stem rising from the centre. It has flowered with Mr. Bateman, producing a flower spike of a foot in length. The sepals and petals are of a wine-red, and the lip white. This will remind our botanical readers of the C veratrifolia, which, notwithstanding its beauty, is much inferior to this. It is supposed to be a native of Japan, and requires to be treated as a stove Orchideæ. It is now cultivated in various collections.

BOTATAS BETACE, Beet-rooted sweet Potato.

| Bot. Reg.

NAT. ORD. CONVOLVULACEÆ. CLASS PENTANDRIA MONOGYNIA.

Repeated statements respecting the inferiority of this very handsome plant, led us to regard it with indifference. The drawing before us, which is a representation of the plant and flower, exhibits a very beautiful object. It is a climbing plant, with dark-brown heart-shaped foliage. The stems are also brown, and the short

thick clusters of flowers are terminal. The flowers are of a pale or purplish white, bell-shaped, spreading at the mouth, having a dark centre, beautifully contrasted with the white pollen of the stamens.

Dr. Lindley says, in reference to this plant, "until the confusion which exists among the species of convolvulaceus plants shall have been cleared up, by the publication of the labours of M. Choisy, in De Candolle's Prodromus, it is impossible to say whether a given tropical species is new or not. I am, therefore, by no means able to affirm that such is the case in the present instance. A diligent search has not enabled me to discover any record of it, and at all events it is new to our gardens."

It is a native of Demerara. It may be grown in a close green house, but will succeed much better in the store. This is a plant, as a climber, well worth growing as a green-house or store climber; and its roots, which are said to resemble red beet, form a singular part of its character.

ECHEVERIA SECUNDA, One-sided Echeveria.

Bot. Reg.

NAT. ORD. CRASULACE ... CLASS DECANDRIA PENTAGYNIA.

This is a pretty houseleek like plant, with rather compact and fleshy leaves, sends its flower stem from towards one side, and hence the name secunda. The flower stalk is about a foot in height, bearing very pretty orange-coloured flowers towards the extremity; at present cultivated in the garden of the Horticultural Society.

CATTLEYA LABIATA var. MOSSIÆ, Mrs. Moss's Cattleya. [Bot. Reg. NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

Beautiful a plant as this is, and different as it sometimes appears to be from C. labiata, we are satisfied it is a mere variety of that species, from which it differs principally in the cup, being yellow mottled with crimson, instead of deep blood red; but none of these are sufficient to constitute a species. It is very handsome. Sir William Hooker describes "the original C mossiæ as being seven inches and a half in diameter, from tip to tip of the two opposite petals eight inches and a half, each petal being a little more, than four inches long and two inches and a half broad, twenty-four inches in the circumference of the entire blossom." And Dr. Liudley adds, "I have seen one such specimen equally large, and it is probable that such specimens will not be uncommon, when the imported plants have recovered their full health." He further adds, "it is not merely in the case of C. mossiæ that the supposed species require reconsideration. It is probable that C. Harrisonii is a var. of C Loddigesii, as C intermedia is of Forbesii."

LEMONIA SPECTABILIS, Beautiful Lemonia.

Bot. Reg.

NAT. ORD. RUTACEÆ. CLASS PENTANDRIA MONOGYNIA.

A handsome evergreen stove plant, with trifoliate leaves on short footstalks, and bearing from the axils of the leaves scarlet flowers, having the formation of orange blossom. This will probably prove a pretty and desirable plant for the stove. It has been imported by the Messrs. Loddiges, from Cuba.

HARDENBERGIA DIGITATA, Finger-leaved Hardenbergia. [Bot. Reg.

NAT. ORD. FABACEÆ. CLASS DIADELPHIA DECANDRIA.

This genus, it is hardly necessary to say, is very nearly allied to the genus Kennedya. The flowers are produced at the axils of the leaves, which are small but numerous, and of a blue colour, having a shade of purple in them. It has been raised at Bagshot, by Mr. Toward, in the garden of her Royal Highness the Duchess of Gloucester. The leaves or leaflets grow in fives, and on this the spe-

eific distinction is founded. Dr. Lindley thinks it a handsome species, but not equal to H comptoniana.

RHODODENDRON ARBOREUM CINNAMOMEUM FLORIBUS ROSEUS.

Tree Rhododendron Cinnamon-leaved Var., with Rose-coloured Flowers.

[Bot. Mag.

NAT. ORD. ERICEÆ. CLASS DECANDRIA MONOGYNIA.

This handsome variety of Rhododendron has bloomed in the Manchester Botanic Garden. The flowers are yellow, with a slight shade of purple or rose. The individual flowers are remarkable for their large size. The foliage is of a light-green above, and of a buff or yellow colour underneath. Mr. Campbell, in his note to Sir William Hooker, sent, together with the specimen from which the drawing was made, remarks, that "the plant from which it was taken has been in flower here about a fortnight, and has been much admired; and we measured one blossom this morning, which was two inches and a half in diameter." Sir William Hooker observes, with respect to this plant, "How far the Rhododendron Campanulatum of Don, in Sweet's Br. Fl. Gard., t 241, and table 3759 of our Magazine ought to be considered distinct from this, does with us admit of doubt. That species should have a five, not a ten-celled ovary, but we have had no means of investigating that point. On comparing the figures, we find that our present species has the largest flowers, the colour is more varied, more yellow within the tube, and the deep sanguineous dots are much more numerous." It will be understood from these remarks, that this plant is nearly allied to the R campanulatum; and the probability is, that it will prove one of the varieties of that species, as there are such in existence; and one or more were exhibited at the first flower show, held at Chiswick during the past season.

SENECIO HERITIERI VAR. CYANOPHTHALMUS, Heritier's Groundsell. Blue-eyed Var.

NAT. ORD. COMPOSITEÆ. CLASS SYNGENESIA SUPERFLUA.

(Syn. Cineraria lanata.)

This is an interesting and beautiful plant; from what country, or how it has originated, we have no information. Mr. Ferguson, of the Belfast Botanical Garden, forwarded it to Sir William Hooker, who thus speaks of it:—"Notwithstanding the very unusual colour of the flowers, for one of the natural order Compositeæ, I have little hesitation in referring it to the well-known Canary plant, the Senecio heritieri. The old Ceneraria lanata of our gardens 'compositeæ,' with a white ray and yellow eye or disk, are common, as every one knows; but I have never before met with any having a white ray and a blue disk."

To the eye of a botanist, who can discover the peculiarities and beauties of the flower just related, there is, no doubt, much to admire; but to the ordinary florist, who judges the merits of his flowers by a different standard, we are not so sanguine that this plant would be very highly prized.

HYMENOXYS CALIFORNIA, Californian Hymenoxys.

Bot. Mag.

NAT. ORD. COMPOSITE E. CLASS SYNGENESIA SUPERFLUA.

This is a pretty little syngenesious yellow flowered annual, with small subdivided leaves, sent to Sir William Hooker, by Mr. Moore, of the Glasnevin Bot. Garden and is expected to prove perfectly hardy.

LEATRIS PROPINQUA, Sharp-scale spiked Leatris.

NAT. ORD. COMPOSITE & VIERNONIACE &. CLASS SYGNENESIA &QUALLIS.

This is a showy Autumn plant, with light rose-coloured flowers. Originated

in the Edinburgh Society's Garden, where it was designated L. paniculatum, but to which it has no affinity as a species.

TAGETES CORYMBOSA, Corymb flowered Marygold.

Bot Mag.

NAT. ORD. COMPOSITEÆ. CLASS SYNGENESIA SUPERFLUA.

This has the appearance of a small yellow marygold, and is in its general aspect rather common place. An annual from Mexico, and raised by Mr. Leads, of Manchester, of seeds obtained from that country.

LÆLIA CINNABARINA, Cinnaber-coloured Lælia.

[Paxtons Mug.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

The flowers of this species are of a brilliant scarlet, and it is an exceedingly handsome species; flowered at Messrs. Youngs', of Epsom. It was obtained by those gentlemen from Rio Janeiro.

CORRÆA LONGIFLORA, Long-flowered hybrid Corrwa.

NAT. ORD. RUTACE ... CLASS OCTANDRIA MONOGYNIA.

This is an exceedingly beautiful variety of Hybrid Corræa, originally raised by Mr. Milner, of Stockwell, which, together with some other varieties, were ultimately purchased by Lucombe, Pince, and Co., of the Exeter Nursery, who, in 1839, possessed the whole saleable stock. During the present season we saw this plant, which, no doubt, will be highly prized by amateurs and lovers of choice plants. Its sleader graceful habit, when well grown, cannot fail to render it popular. The foliage resembles that of C. speciosa, but the flowers are of a much brighter colour, and longer than that species.

PHLOX COLDRYANA, Mr. Coldry's Phlox.

NAT. ORD. POLEMONIACEÆ. CLASS PENTANDRIA MONOGYNIA.

A truly beautiful hardy Phlox, of hybrid origin, having been obtained by the intermixture of the fertilizing properties of the same genus. This operation, it appears, was performed by Mr. Coldray, foreman in the Bristol Nursery. This plant originated some years ago, but it does not appear to have been me very generally known until latterly, having bloomed in the Epsom nursery, and amongst the fine collection cultivated there, this species appeared superior in beauty to any of the genus. The florets are very large and round, and of an exceedingly deep velvety purple. The foliage is broad, and somewhat heartshaped. This plant will not disappoint whoever may be at the trouble and expence of obtaining it.

CYCLOGYNE CANESCENS, Hoary Cyclogyne.

Paxton's Mag.

NAT. ORD. LEGUMINOSEÆ. CLASS DIADELPHIA DECANDRIA.

This is a native of the Swan River Settlement, whence seeds were collected and transmitted to this country by Mr. Drummond, and from these seeds were obtained the plant in question, which was raised by Mr. Low, of the Clapton Nursery. The flowers are of a greyish colour, and are produced very profusely. The plant would appear to be half shrubby and probably perennial. This we also saw in bloom, and it was at the time thought to be nearly allied to Clianthus.

MEYENIA HAWTAYNEANA, Hawtayne's Meyenia.

| Botanist.

NAT. ORD. ACANTHACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

We have on various occasions noticed this plant before, under the generic name of Thunbergia. It is a fine climber, from the East Indies, and therefore requiring

the temperature of the stove. The name of this plant has been changed on some slight modification of the anthers differing from the rest of the genera, on which is founded a new genus. It would have been quite as well for floriculture, and but little disadvantage to science, had this plant continued undisturbed to receive the name of Thunbergia. It is a very pretty plant, having compact, cordate ridged foliage, but hitherto has not displayed a disposition to bloom freely.

FUCHSIA CYLINDRACEA, Cylindrical Fuchsia.

Botanist.

NAT. ORD. ONAGRACEÆ. CLASS OCTANDRIA MONOGYNIA.

. This species of Fuchsia has been raised from Mexican seeds by Mr. Barker, of Birmingham. It is a plant of small red flowers, not unlike Thymæfolia. It would appear that we shall shortly have the Fuchsia divided into several genera.

SOLANUM ANGUSTIFOLIUM, Narrow-leaved Solanum. | Botanist.

It would appear that the figure before us represented an ornamental species of the genns. The leaves are, of course, narrow, as the name implies, and the flowers are pale purple in colour, and comparatively large. It has been raised from seeds sent home from Buenos Ayres by Mr. Tweedy. It has bloomed with Mr. Tillery, gardener to his Grace the Duke of Portland, at Welbeck, in Nottinghamshire. It is described as very fragrast.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

BEUILA BHOJPATTRA.

Dr. Lindley says this is the finest of the Himalayan species, and occupies the highest of the loftiest mountains; introduced from thence by the East India Company. It is expected to be perfectly hardy, and Dr. Wallach gives the following description of it:—"The epidermis of this species of Birch is used by the mountaineers instead of paper, for writing upon. It is of a very delicate texture, and peels off in large masses, of which great quantities are brought down into the plains of Hindustan, where it is employed for covering the inside of the long flexible tubes of the apparatus used for 'smoking tobacco, commonly called hookhas.

SPIREA FISSA.

From Mexico, introduced by Hartweg, who says it is near S. ariæfolia; and Dr. Lindley says it is a handsome looking plant, and quite distinct from any previously discovered.

MAXILLARIA MACLEEL

Nearly related, but undoubtedly distinct, from M. tenuifolia, the only species with which it is necessary to contrast it.

DENDROBIUM HERBACEUM.

A plant of little beauty.

SCHIZONOTUS TOMENTOSUS.

A handsome and new hardy shrub from the new northern province of India. Introduced by the East India Company, and recently raised in the garden of the Horticultural Society. It has the habit of Spiræa sorbifolia, but has downy leaves, and the flowers, with which we are unacquainted, appears from the fruit-bearing specimens to be produced in very large panicles.

BOLBOPHYLLUM LIMBATUM.

A plant of but little beauty, cultivated by the Messrs. Loddiges.

DENDROBIUM LONGICOLLE.

Singular, and belonging to the same section as Amplum. The flowers are straw colour.

CIRRHOPETALUM VAGINATUM.

A native of the same country as the two last-Sincapore; also with Messrs. Loddiges.

ONCIDIUM INCURVUM.

A pretty species, with pale pink flewers mottled with white.

PLEUROTHALLUS SERIATA.

Inconspicuous, and scarcely worth growing.

CATASETUM TRULLA.

A plant of but little beauty.

CYMBIDIUM PUBESCENS.

A native of Sincapore; cultivated by Messrs. Loddiges, and is very beautiful. CŒLOGYNE CUMINGII.

Very handsome, and cultivated by Messrs. Loddiges. The flowers are white, with a yellow spot in the middle of the lip.

CATASETUM SUCCATUM.

Of all the strange forms presented by the various species of Catasetum, this is one of the most extraordinary. It has very large flowers, with rich purple spotted sepals and petals, and is a bright yellow, covered closely with crimson dots. The latter is pierced in the middle by a narrow aperture which leads into a conical chamber or bag, which is not observed until the back of the lip is turned up. Messrs. Loddiges obtained it from Guayaria.

VALERIANA NAPUS.

Root tubrous like that of a turnip, and but of little beauty. Half hardy,

SOLANUM MACRANTHERUM.

A beautiful half hardy herbaceous plant, raised by Mr. Page, of Southampton. The flowers are purple and large.

CATASETUM CORNUTUM.

Cluster of flowers, large, dull green and spotted with purple,

CATASETUM CULLOSUM.

In habit resembling Catasetum tridentatum, but specifically distinct.

MYCRANTHES OBLIQUA.

A fleshy leaved plant from Sincapore, with small white flowers.

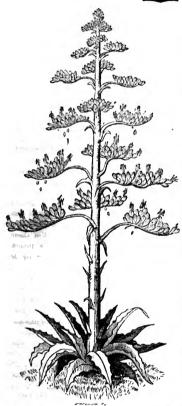
SARCANTHUS PALLIDUS.

A plant of little beauty.

COMPARETTIA ROSED.

An orchidaceous plant of slender delicate habit, with rich rose coloured flowers,

MISCELLANIES.



LORD AILSA'S AGAVE AMERICANA.—In addition to the beautiful plate which our artist has enabled us to give of the splendid Aloe now blooming at Isleworth, the seat of the Marquis of Ailsa, we have caused the annexed engraving to be executed, in order that our readers may have a correct idea of the magnificent effect the entire plant presents to the visitor.

The Fuchsia, which we noticed as having been exhibited by Mr. Standish, at the first Chiswick show, is now increasing rapidly in other nurseries, and will, no doubt, be offered early next spring. It resembles the F. fulgens in habit, but it has not yet flowered, and is evidently very distinct from that species.

In Paxton's Magazine for October there is a brief description of what appears to us a most excellent construction of a house or pit for the growth of Cacti, which may be described as follows: the front wall, say two feet high, with a walk outside, the stage for the plants is so near the glass, that room is allowed for the plants only between it and the glass. The plants are seen from outside, the glass being nearly

flat, or having but little slope There is a path within the house and behind the stage, which is covered with beards or slate. Thus a most economical and well adapted structure for the growth of this curious family may be provided, the great object in the cultivation of which is to keep the plants near the glass.

In the same number it is recommended to grow Cacti with dung heat; and this is unquestionably the best mode of treating the smaller kinds, when in a growing state,

In the October number of Loudon's Magazine is a description of the Derby Arboretum, designed and laid out by the Editor; it is accompanied with a plan of the ground, and a list of the trees which have been planted.

Active progress is making towards the obtaining the sanction of Government for the formation of a Royal Park, on the east side of the metropolis. The site in view is within the Tower Hamlets, reaching as far north as Lower Clapton. It is expected an exchange of land will be offered by the Crown for that intended for the Park.

THE WEST LONDON GARDENER'S ASSOCIATION FOR MUTUAL INSTRUCTION, MARCH 19 .- Mr. Croucher read an essay on the cultivation of the order Opuntiaceæ. He divided them into two classes. The first, ranged under Cactus epiphyllum; the second, under Cactus melocactus. To raise new varieties of the Cactus epiphyllum, he sows seeds raised from impregnating cross varieties in pots or pans, filled with equal proportions of leaf mould, light loam, and peat earth, and placing them in a temperature from 60 to 70 degrees. When propagated from cuttings, the shoots are laid in the sun for a few days, and then potted and placed in the above temperature. These should be grown from March to August. when they should be removed to a dry airy situation in the greenhouse, and a little water given them. Those to be flowered in March, should be placed in the forcing house in January. When done flowering, the old shoots should be thinned out, leaving the plants regularly furnished with flowering shoots for another year. They may flower in autumn again, by keeping them in a growing state, shortly after done flowering. From such treatment he had seen plants, two years old, producing fifty expanded blossoms. They may be potted at all times, and grafted on the strong growing sorts. The compost, he recommends, is equal portions of light turfy loam, pigeon's dung, brick rubbish, and a third of sheep's dung. For the cultivation of Mamillaria, Melocactus, &c., he recommends a house for the purpose, where the plants could be set near the glass, growing them in a high temperature, with plenty of water in summer, potting them high in the not to prevent damping in dull weather, and keeping them rather dry in winter in a temperature, by fire heat, from 45 to 50 degrees. The soil he considers most suitable, to be equal portions of peat earth, rough sand, maiden loam, and soft brick, taken from any old wall; the rough pieces of the latter to be used as drainage.- Mr. R. Fish, spoke in high terms of the Essay, but stated he had never been very successful in the cultivation of the tribe.-Mr. Caie made a series of remarks upon the different parts of the Essay. He also noticed that in specimens of the Melocactus, &c., imported, they had often parts decaying which it was necessary to cut out, and to fill the parts with slaked lime. When appearing too damp, it was advisable to turn them out of their pots, and allow the fresh roots to be issuing before potting them. All this tribe he invariably potted high in the pot, as when the base was resting on the damp mould it was very apt to rot; but when potted sufficiently high, they mght have plenty of water in the growing season, without injuring them .- Mr. Thompson had been accustomed to give the Cactus epiphyllum rather richer compost than recommended, namely, equal portions of well decomposed cow dung, loam, and lime rubbish. He had had the Epiphyllum truncatum, of three years' growth, with 130 flowers, and had seen the speciossimum with 150. He approved of syringing this tribe rather than watering .- Mr. Judd considered, that cow dung was an excellent ingredient for growing such plants, but considered pigeon's dung preferable for flowering them. He approved of using brick rubbish, but contended it should be old. The Mamelaria, &c., he considered, should stand on slate, or rather stone, and be quite near the glass .- Mr. Caie went into the theory of plants growing at improper distance from the glass, so far as their healthy growth and flowering were concerned, and mentioned that he had now many plants assuming a tree-like appearance, which would assume their recumbent position when once exposed to the full influence of the sun and air. He also mentioned that he had seen the Cactus truncatus, under the management of Mr. Henderson, of Woodhall, grafted on C triangularis, measuring nine feet in circumference .- Mr. Fish went at considerable length into the scientific principle involved by the failure of growing plants at a distance from the glass, that the tree-like appearance of the plants mentioned by Mr. Caie, was produced by the same means as made the stem of a potatoe, climb and protrude itself through a small opening in the wall of a dark room -A gentleman from Kew, not a member of the Society, made a series of interesting remarks on the subject. He considered that the Epiphyllum tribe succeeded best when put in the bark stove in the growing season and syringed .- Mr. Judd remarked, that it wat of importance that when they were coming into flower, they should not be kept dry, as it would cause the flowers to drop, nor yet too moist, as it would spoil the colour .- Mr. Grey gave an account of the method adopted by a very successful grower, with whom he at one time lived. In summer he gave plenty of heat and water, and from October till March, gave little of either. He entered the theory of the manner in which light acted upon plants, and supposed that heat was produced by the friction of the rays. This led to remarks from Mr. Caie and Mr. Fish, respecting metallic roofed houses, showing that plants ought to be placed farther from them than from wooden honses.-Mr. Keane summed up all the discussion, expressed his satisfaction with the evening's proceedings, adverted to the importance of syringing the Epiphyllum tribe when growing, as the Epidermis, absorbed much moisture, and parted with it very scantily.

[It may seem necessary that we should apologise for the apparent neglect in not noticing this paper earlier. It appears to have been forwarded to the care of our publisher, where it had been overlooked, and has only just reached us. We shall, at all times, have pleasure in receiving notices of this kind.—ED.]

REMARKS ON THE SCOTCH FIR -The Scotch fir in perfection is a very picturesque tree, though we have little idea of its beauty. It is generally treated with great contempt. It is a hardy plant, therefore put to every servile use. If you wish to screen your house from the South-west winds you will be told to plant Scotch firs, and to plant them close and thick. Again, if you want to shelter a plantation of your trees, the recommendation is plant Scotch firs, and thin them out as you please afterwards. This tree is called the Scotch fir because it grows naturally in the Highlands of Scotland, where the seeds falling from the cones, come up and propagate themselves without any care. Besides its value as a timber-tree, it yields turpentine, tar, and pitch; indeed this may be said of all the species of fir. They abound in a resinous juice, which, exhuding from the tree in its natural state, is turpentine; and the same, when forced out by a close-smothered fire, is tar; and this, thickened by boiling, becomes pitch. The fir is an ever-green tree; the leaves are pointed, of a dark hue, and grow in pairs, out of one sheath; in their first growth solitary and smooth. Some of the most picturesque trees of this kind, perhaps, in England, adorn Mr. Lenthall's mansion of Basilsleigh, in Berkshire. The soil is deep, but rich sand, which seems to be well adapted to them. As they are here at perfect liberty, they not only become large and noble trees, but they expand themselves likewise in all the

careless forms of nature. Sir T. Lauder speaks of this tree in the highest terms of encomium:-" We have seen it," he says, "towering in full majesty, in the midst of some appropriate Highland scene, and sending its limbs abroad with all the unconstrained freedom of a hardy mountaineer, as if it claimed dominion over all other nations around it, and have then looked upon it as a very sublime object. People who have not seen it in its native climate and soil, and who judge of it from the wretched abortions which are swaddled and suffocated in English plantations, amongst deep, heavy, and wet clays, may well call it a wretched tree; but when its feet is amongst its own Highland heather, and when it stands freely on its native knoll of dry gravel, or thinly covered rock, over which its roots wander afar in the mildest reticulation, whilst its tall furrowed, and often gracefully sweeping red and grey trunk of enormous circumference, rears aloft its high umbrageous canopy, then would the greatest sceptic on this point be compelled to prostrate his mind before it with a veneration which, perhaps, was never before excited in him by any other tree. The Scottish Fir pastures entirely on the surface soil, and never sends its roots downwards. All it wants, therefore, is dryness below. It thrives by the sparkling rill, the mountain torrent, or the wide and rapid river; but though Nature often sows it in the bog, it is there stinted in its growth, and soon sickens and dies."

It is a fact worthy of record, as we dare say but few are aware, that the old Bath Scarlet Geranium is capable of being preserved alive for many years, under so many disadvantages: a friend having recently pointed out to us a plant of the variety in question, which had been presented to the family on the birth of a child, which is now eleven years of age. This Geranium plant is still alive, and annually produces one or more leaves and flowers. What renders this circumstance remarkable is, that the plant has, during this eleven years, been treated as a window plant—not in the country, but in London.

MR. EDITOR.-Seeing your Magazine has passed into the hands of another Publisher, by which a change has been effected in its appearance, very creditable to that spirited Publisher under whose care so many elegant works on Botany and Floriculture have been introduced; therefore that the Floricultural Magazine has now assumed a position and appearance certainly superior to any of its class. May I, therefore, as a well-wisher and Subscriber, suggest to your consideration the propriety of introducing a monthly calendar, embracing a notice of the weather for the current month, with directions for performing the necessary operations requiring to be attended to, under the heads of Flower Garden, Plant Stove, Green-house, Frames, Pleasure Ground, Walks, Trees, Park Scenery, and Kitchen Garden, including Pinery, Vinery, Mushroom Beda, Vegetable quarters, Seeds, Roots, Ice-house, the filling and management of pruning and planting Fruit Trees, gathering and storing Fruit, the management of the Beds, with many other important hints which would no doubt occur to you as a practical man. SUBSCRIBER.

[This subject having been frequently recommended to us before, we shall, therefore, very likely decide to introduce, in future, a monthly notice of the various operations requiring to be attended to during each month.—ED.]

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LV.-DECEMBER, 1840,

REMARKS ON THE AYRESHIRE ROSE, ITS USES, AND ON THE SHADE OF TREES ROUND DWELLING HOUSES.

The want of under growths in plantations and shrubberies, where, in the latter situation, it is necessary that the trees and shrubs attain such size that the lower branches, from age and other causes, die off and but little else fill their places, the deficiency of foliage in such situations has often struck us as being one of those causes of deformity so commonly met with about old established mansions. It is not unusual, even in the immediate vicinity of the house or mansion, to find the commonest forest trees allowed to attain their natural size. by which the light and air is so much obstructed, that it is with difficulty plants of any kind as undergrowth can be found to retain even a scattering of foliage. In situations of this kind the shade and want of air are such, that even the common evergreens seldom continue healthy. To meet this evil, in part, we have seen instances, where the plantations are not excessively thick, of the various kinds of Ayreshire roses succeeding, and where they do thrive, their appearance is infinitely more pleasing, and in better taste, than naked and unhealthy shrubs.

We would merely recommend the Ayreshire rose for such situations, as an expedient to meet an evil which it is determined not to remedy in the right way, that is, by cutting away and thinning the trees properly. If it be desirable that dwarf trees and shrubs present a pleasing and healthy appearance in any situation, it is particularly so in the shrubberies near and close to the dwelling-house. Or, if the kind of air which we breathe have any thing to do with our health, then it is worth while for those who are surrounded in their dwellings with thick plantations or lofty trees, to pay some attention to this subject. If the mind be affected by external objects, it cannot be a matter of indifference, that from the dwelling room windows are seen,

during the dull wet weather of autumn and winter, the raw damp earth sending up its pernicious vapours, which being in immediate contact with the house, supply the dwelling rooms with whatever change of air they obtain. When trees are planted for shelter, they can generally be placed at such a distance from the house as to allow of an open current of air round the house itself; and in situations where trees are required, and where under growths succeed with difficulty, the varieties of Ayreshire roses might be tried; they would at least succeed near the outer edges, and present a much more pleasing appearance than evergreens, where the latter do not thrive. This is especially the case where the parts of the pleasure ground are occupied with large clumps of common-place shrubs, rendered alike unhealthy and unsightly by the shade of large trees: in such situations the Ayreshire rose would grow and bloom in great beauty. This rose is also exceedingly useful in forming thick screens for concealing objects, and is therefore peculiarly valuable in shrubberies too narrow to admit of laurel and other evergreens being used for the same object.

The Ayrshire rose, when applied in this way and for this purpose, may be trained to upright poles, and fastened from one pole to another; or it may be trained to trellis or lattice work, and allowed to grow wild; its appearance, when thus treated, is that of a thick impervious bush, the breadth of which is not apparent. We have latterly had occasion to deal with the subject, both as to trees and the use of the rose, and we make these remarks with the view that they may be, in some degree, useful to others.

EDITOR.

GARDENING TOUR, WITH REMARKS MADE AT THE VARIOUS PLACES.

(Concluded from our last.)

Willersley House, near Matlock, the seat of R. Arkwright, Esq.—The grounds and walks are romantic and beautiful; the gardens not remarkable. I noticed some gooseberry trees, very neatly trained, and, perhaps, covering a space of twenty-five to thirty feet of the wall, and of variety sometimes called the Lancashire red.

Derby Arboretum.—This is just completed, and is a valuable gift, having been formed and planted by Joseph Strutt, Esq., and presented to the Town Council. The surface of the ground is undulated, and covered with turf; the trees and shrubs are planted singly, on little hillocks, which, no doubt, contributes greatly to their health, by being raised so as to prevent their roots reaching the subsoil, and has a very pleasing appearance. The whole has been laid out and planted according to a plan designed by Mr. Loudon.

Edward Strutt, Esq., St. Helens, near Derby.—The Garden is small, but the things appear well managed. In this garden has been erected, and is still in good repair, a curvilinear iron roofed hot house, in which there is an excellent crop of grapes; but it is found necessary to keep the roof continually shaded during bright sunshine. In the flower garden there are some pretty contrivances for trellis work, for the training of roses and other creeping plants.

Alton Towers—Earl Shrewsbury.—This is one of those places that cannot be easily described; the flower garden is a mass of beauty, in grand confusion. There are clumps of trees, shrubs, flowers, vases, pagodas, prospect towers, terraces, walks, fountains, lakes, waterfalls, raised roads, archways, gilded conservatories, statues, &c., and the whole is kept in very first rate style.

Trentham, near Stone—Duke of Sutherland.—This is an extensive place, the kitchen garden is old, but in a fruitful state, the wall trees, generally, are in a very healthy condition, as also are those in the forcing houses. The pineries are very extensive, the best grown, and the greatest number I have seen in any one place. One of the vineries is entirely filled with a black Hambro vine, bearing an abundant and well coloured crop of grapes. The flower garden is the grand feature of the place, and is connected with the south front of the Mansion; it is formed on lawn, with large flower beds, subdivided with box edging, and small gravel walks, others are raised, and supported at the edges with turf; it is at present in an unfinished state. There is also a large conservatory now in course of erection, which, when finished, will form a wing to the house. Mr. Woolley has the care of the forcing and kitchen garden, and Mr. Scott superintends the flower garden.

Sandon Hall—Earl of Harrowby, near Stone.—A finely wooded old place; it would appear that the whole of the pleasure ground has been subject to an attempt to give it the appearance of a flower garden, and by this means the grounds have a common place appearance, the clumps and beds being scattered over the whole surface. The kitchen garden has a peculiarly excellent aspect, falling from the east and from the west to the centre walk, which latter has a south aspect.

Ingestrey Hall, near Stone—Earl of Talbot.—Kitchen garden old and extensive, the hot houses are also old, but there is just finished an excellent conservatory detached from the house, which is a pretty architectural object. This old garden is very productive, the hardy fruit, and also the grapes and pines are in good condition; the gardener, Mr. Taylor, is proceeding with several improvements.

Shugborough Hall—Earl of Lichfield.—Gardens small. This place has long been famous for the successful cultivation of the pine-apple, by Mr. Mc Murtre, the gardener. It was here where

the Otaheite pine was first brought into notice; and I believe Mr. Mc Murtre supplied the principal stock, when it was first distributed amongst growers. I noticed here a house in which was growing an excellent crop of cucumbers, trained to trellis work near the roof.

Teddesley Park—Lord Heatherton, near Penkridge.—This is an extensive place, pretty well wooded, and has a handsome piece of water. The gardens are rather extensive, and, with the wall trees, are in pretty good order; there are also pines and vines, some fine specimens of red and white cedars, and also a quantity of handsome plants of the Cratægus. The evergreens and other ornamental plants out of doors are healthy, and very beautiful; near the house I observed a bed of China roses, laid down or fastened to the ground, which had a pleasing appearance. This is, altogether, a very fine place.

Aston Hall, near Birmingham, the seat of — Watt, Esq.—Not extensive, the gardens of but little importance, without glass, except an old conservatory, occupied with Camellias, Fuchsias, &c.; it is generally allowed that this place contains the finest collection of American plants any where to be met with, and grown in the highest

perfection.

Guyscliff, near Warwick.—This is rather a small place, the garden is in a low cold situation, but the finest wall fruit is grown here of any I have seen this season; there are in the pleasure ground three red cedars, two of which are the largest that I ever saw. The house is curiously situated on the summit of a sandstone rock, rising abruptly from the river Avon, which passes close to its base.

Warwick Castle—Earl of Warwick.—This is also on the banks of the Avon. The gardens are not very remarkable; I noticed, however, some fine young trees of French and Flemish pears, two and three years planted, and bearing a quantity of fruit. The providence pine is grown here in high perfection. I saw one which was just cut, that weighed ten pounds, and two others very fine. About forty Cedars of Lebanou, which were planted by the late Earl, on both sides of the river, are now splendid objects.

I attended at the Birmingham show of Dahlias, open to all England. The company was not very numerous, and the competitors still less so in proportion; the flowers were far from what I had expected, considering the liberal prizes offered, namely, a silver cup of £20 for the first prize, and a cup of £10 for the second.

At the Warwick show, held on the 15th of September, I saw some good fruit and vegetables, and the company was highly respectable. There was a strong competition for the Dahlia prize. The successful competitor (Mr. Wingfield, of Melvil house), for the best pine-apple, is now preparing a house for fruiting his pines, the bottom heat to be produced by steam, instead of tanner's bark.

Mr. Cullis, Nurseryman, Learnington.—This Nursery is well worthy the inspection of those who visit this fashionable watering place; they will find it a multum-in-parvo. It is one of the best Nurseries I have seen, and the plants are in excellent condition.

ON THE THUNBERGIA.

BY THOMAS DRURY.

I again take the liberty of trespassing on your kindness, in search of a little further information on the new Thunbergia Cærulea, which belongs to a tribe of plants of which both my employer and self are exceedingly fond. Like the Fuchsias, we grow them with great pleasure; and as most blue flowers are much sought after, this must make this a striking variety. We like the old sorts here much; for, in point of beauty and durability, I think they stand second to no summer flower in cultivation. This season, and partly through the gleanings from your Magazine, I have been more than usually successful in their growth. I have one plant now near eight feet in height, which flowered profusely from top to bottom, from May to the end of September, retaining all the time a rich green foliage; and another trained round a wire six and a half feet in height, and four in circumference, before it began to cast its foliage in September, was clothed. from the rim of the pot to the very top of the frame, for many weeks, with a complete sheet of blossom; and were throughout the summer the admiration of every one who saw them. They amply repaid us for all the trouble bestowed upon them. The compost in which they were grown was equal parts of earth and well rotten manure, to which I added about one-eighth part of good loam, which appears to add to the boldness of the flowers; but if too much loam be added, I have often found them to sicken, in which case it becomes difficult to keep off the red spider, which completely destroys them. With this treatment they have been pronounced superior specimens.

Will the same treatment answer for the blue one? Does it require more than a greenhouse to grow it to perfection? Can it be kept through the winter in a dry house, with from 50 to 55 degrees of heat? Can it be procured by seed, the same as the other varieties? I am rather surprised we have not seen it more noticed. Do you consider it a good thing? Is the beautiful Ipomæa, figured in this month's number of the Magazine, annual or perennial? That omission was, I presume, in your notice of it, an oversight.

Should I be infringing on your pages too much, you must curtail; but it is knowledge we read for, and a great many good things are grown in an unsightly state for want of knowing their proper treatment, and even lost—an evil which such a work as your Magazine is fully qualified to correct.

We are great admirers of that autumnal flower, the Chinese Chrysanthemum, although we can grow it to no advantage in this part of Lincolnshire without the aid of a greenhouse, particularly the better sorts.

If, Sir, when convenient, you would give an answer to some of these inquiries, you would, I am sure, oblige many of your readers.

Louth. October 9th. 1840.

[We suppose our correspondent refers to the Thunbergia Hawtayneana. It is a native of Nepal, and we therefore think it quite possible to grow it in a greenhouse, or rather in a temperature varying from 50 to 55 degrees. This would be a high temperature for an ordinary greenhouse during winter, and we have no doubt the Thunbergia in question might be grown in it to high perfection. It cannot at present be procured by seeds,—we are not aware that there is any such thing to be purchased. Plants are at present a guinea each. We think it a good thing.

The Ipomoa Leari, figured in the October number of the Floricultural Magazine, we believe to be perennial.

SELECTION OF FRUITS FOR A SMALL GARDEN.

BY A FRIEND TO HORTICULTURE.

Amateurs, and persons having but limited space for the growth of fruit, cannot, of course, avail themselves of an extensive assortment. Selection is, therefore, better than collection, at least in such cases. With this view, I therefore forward you the following, being such as experience has enabled me to consider the best. Such remarks relative to their merits, as occur to me I shall notice as I proceed. I shall not attempt to specify how many trees or kinds should be grown in a given extent of garden; my object shall rather be to name those only which are, under ordinary circumstances, found to be generally good; and shall commence with

APPLES.

Alfriston, in use from November to April, and is most excellent for the kitchen.

Beachamwell, December to March, table.

Beaufin, Norfolk, January to June, valuable only for drying.

Belle Fleur Brabansche, November to April, kitchen.

Bitter Sweet Siberian, September, generally recommended as a cider apple, but it is a most valuable kitchen fruit,

Calville Malingre, January to April, kitchen, a great bearer.

Codline Carlisle, August to December, kitchen.

Court of Wick, October to March, table, and very superior.

Dutch Mignonne, December to April, kitchen or table.

Golden Drop (Coe's), March to May, table.

Ditto (Harvey), December to May, table or kitchen, one of the best. Margaret (Early Red), August, table, and one of the best early kinds. Reinnette (Blanched Espange), November to March, kitchen or table,

and one of the largest apples grown.

Rennette du Canada, November to April, kitchen or table.

Ribston Pippin, November to March, table or kitchen.

Straat, December and April, table, like the Newtown Pippin.

PEARS.

Ambrosia, moderate size, texture buttery, table, September, not a good keeper, but a delicious fruit.

Bequene Musque, one of the best stewing kinds.

Bergamotte Autumn, third-rate size, juicy, October.

Beurre d'Aremberg, second-rate size, table and buttery, for wall or stand.

Beurre Diel, good size, table and buttery, October to November, wall or stand. This kind requires the branches keeping thin.

Beurre Easter, good size, table buttery, January to March, wall or standard, one of the very best.

Beurre Rance, moderate size, table and buttery, March to May.

Bon Chretien Fondant, good size, table and juicy; like the St. Germain.

Citron des Carmes, small, table and juicy, July, one of the best early kinds.

Colmar, small, table and buttery, November to February; requires a wall, but is one of the very best pears.

Glaut Morceau, good size, table and buttery, November to January requires a wall. This hangs late on the tree.

Marie Louise, table and buttery, good size, October to November. One of the finest, and bears abundantly, either on a wall or on a standard: a north wall suits it best.

Napoleon, good size, table and juicy, November and December. This is a vigorous growing tree, an abundant bearer, but should not be used till it changes to a pale straw-colour.

PLUMS.

Coe's Golden Drop, good size, flesh adhering to the stone, for table or for preserving; one of the very best in use in the end of September.

Drap d'Or, small, and separating from the stone, a table fruit, and resembling the green gage, both in appearance and quality.

Green Gage, small, flesh separating from the stone, table, or preserving, in use the middle of August. This old sort is unequalled by any of even the best of the new varieties.

Kirke's small, separating, table, beginning and middle of September. Reine Claude Violette, small, separating, table, September: does well as a standard.

Washington, good size, separating, table; grows vigorously as a standard, and bears abundantly.

Wine sour, indispensable for preserving.

Damson, equally valuable for the same purpose.

CHERRIES.

Belle de Choisy, good size, 'suitable either for wall or standard; in use beginning and middle of July.

Bowyer's Early Heart, small, standard, table, flesh tender: in use the end of June.

Dounton, wall or standard, table, flesh tender; beginning of July.

Elton, good size, wall or standard, table, flesh half tender; beginning of July.

Griotte, Early Purple, small, wall or standard, table, flesh tender; beginning of June.

Knight's Early Black, good size, wall or standard, table, flesh tender; end of June, to the beginning of July.

May Duke, rather small, wall or standard, table, flesh tender; end of June. An old and common kind, but one of the best.

Morella, common, indispensable for preserving.

White Heart, wall or standard, flesh tender, good size; end of July

GOOSEBERRIES.

Bright Venus, Taylor's White, rough, middle-sized; habit erect.

Champagne Red, hispid, small, erect; the best that is grown.

Ditto Yellow, ditto ditto; very good.

Crown Bob, Melling's Red Rough; large spreading.

Early Green, Hairy, Green, spreading.

Globe small Red, or smooth Scotch, erect; a sharp, rich flavour.

Golden Yellow, Dixon's, smooth, middle size, pendulous.

Green Gage, Pitmaston Grey, smooth, small, erect.

Green Globe, Grey, smooth, middle size, spreading.

Honey White, smooth, middle-sized, erect; very superior.

Large early White, grayish, white, downy, large, erect, very early.

Red Rose, red, downy, large, pendulous.

Rough Red, or Old Scotch Red, indispensable for preserving.

Rumbullion, purplish yellow, small, erect; a great bearer, and much esteemed for bottling.

Scented Lemon, Rider's Red, smooth, large and spreading.

Sulphur, Early Yellow, and hairy, middle-sized, erect; very early.

Warrington Red, hairy, large and pendulous, one of the best; hangs late.

Wellington's Glory, white, downy, large, erect, thin-skinned, and flavour excellent.

Whitesmith (Woodward's), downy, large, and erect; very good.

CURRANTS.

Black Naples. Red Dutch.

White Common.

-- Knight's Sweet.

---- Dutch.

RASPBERRIES.

Antwerp Red. Yellow. Double-bearing Red.

Bromley Hill Red.

Barnet Red.

STRAWBERRIES.

American Scarlet. Black Roseberry. Coul late Scarlet.

Garnston Scarlet. Grove End Scarlet.

Old Scarlet, valuable for preserving.

BLACK STRAWBERRIES.

Downton, very superior.

Elton Seedling, valuable as a late sort.

PINE STRAWBERRIES.

Keen's Seedling, valuable for forcing. Old Pine, or Carolina, an excellent sort.

GRAPES.

Black July. This is valuable on account of its earliness on the open wall.

Esperione, Black; bears well on the open wall.

Frontignan, Grizzly. This requires the vinery.

Hamburgh, Black; the best black grape for a vinery.

Muscat of Alexandria, the best white grown; requires a strong heat.

St. Peter's West's Black; will hang till March.

PEACHES.

Late Admirable, first-rate, as a late kind, to succeed the general crop. Barrington Flesh melting, ripens middle of September; excellent.

Bellegarde, melting, ripens beginning and middle of September. When forced, it succeeds some of the earlier kinds, as the Royal George and Grosse Mignonne.

Catherine Cling Stone, large, and ripens end of September and beginning of October; excellent, when forced.

Early Anne, melting, very early, and, on this account, desirable. Malta, melting, ripens end of August and beginning of September;

keeps well when gathered, and one of the best to bear carriage. VOL. V.

Mignonne Grosse, flesh melting; forces well, and the tree hardy. Nobless, large, flesh melting, and one of the best for forcing, or for

the open wall.

Royal George, great bearer, and one of the best kinds for forcing or open wall; flesh melting.

NECTARINES.

Elrauge, flesh melting, ripens end of August and beginning of September. This is one of the best.

Newington Cling Stone, ripens beginning of September, and is in perfection when it begins to shrivel on the tree.

Roman Cling Stone, and one of the best; ripens beginning and middle of September.

Violette Grosse, melting; ripens beginning of September, and scarcely different from the Violette Hative.

NUTS.

Great Cob; one of the largest, and a pretty good bearer. Cosford; shell very thin, and a very good sort. Filbert, frizzled; very prolific. Filbert, Red; very good. Filbert, White; very good. Prolific Northamptonshire; desirable, on account of its earliness. Spanish, very large.

PINE APPLES.

Black Jamaica, excellent, either for summer or winter. Queen, the best for general purposes. Sugar-loaf, brown-leaved. Queen (Ripley's), rather tender, but an excellent fruit.

The preceding lists contain the names of the well-tried and superior kinds in the several classes. Many more might be added, but selection, and not collections, as I have already stated, is the object of this communication; and those enumerated are sufficiently various for a garden establishment where four or five men are employed. was my intention to have given the synonymes, but to have done this would have greatly increased the length of this paper. Some of the names given are not those usually applied to the kind in question; but, in order to prevent confusion, I have adopted those published by the Horticultural Society in their Catalogue; and in giving an order for any of the sorts enumerated, it ought to be specified that the names are those adopted by the Horticultural Society of London, in their Fruit Catalogue. I have not included some of the newer kinds, of which little can be said at present, beyond that of their novelty. The lists contain such only as are of well known and proved kinds.

[On receiving this communication, it was our intention to have made some remarks on the kinds enumerated in the above list, but want of space prevents our doing so for the present: at a future time, we may offer a few remarks as the result of our own observation, and bearing on the culture and properties of several of the kinds. The sorts enumerated above may be relied upon: we think the selection excellent.—Ed.]

REMARKS ON THE HORTICULTURAL SOCIETY'S GARDEN.

BY T. M.

A few days since, I paid a visit to the garden of the London Horticultural Society, at Chiswick, in walking through which I observed many novelties, some few of which I noted down, for the information of those of your readers who may not happen to have seen them. The gardens were, generally speaking, in good condition, and the display of flowers appears to have been very attractive, though, at the present time, the dahlias, and other tender plants, were cut up by the frost of the 17th of September, the influence of which was by no means limited to Chiswick, but appears to have been extensively felt in many parts of the country.

The orchard and fruit department deserves especial notice, not only as regards the attractive appearance, during the early autumn months, of its trees laden with fruit, but also, and more particularly, inasmuch as I think it may be assumed that the greatest benefits that the Society has conferred on the science of Horticulture have been carried out in this department. I allude to the very extensive collection of hardy fruits which, since its establishment, have been proved, and distributed, and also to the indefatigable exertions of Mr. Thompson, the superintendant of this department, in revising and correcting the nomenclature of fruits, and in curtailing the fruit lists of this country, of the myriads of synonymous with which they abounded. opportunities which this gentleman has had, by receiving both fruit and trees from all temperate regions, and in having ample scope to plant and fruit them, so as to compare and prove their respective merits, have been unprecedentedly great; and it is but justice to remark, that he has employed the means within his reach to the infinite benefit of those who are interested in Pomological matters. In walking through the fruit room, the following kinds of pears struck me as being particularly fine and valuable kinds, viz., Beune Diel, Beurre Rance, Doyenne gris, Beurre d'Aremberg, Marie Louise, Doyenne blanc, Glout Morceau, Napoleon, and many others.

The new Conservatory, npwards of 60 yards in length, has a very grand and imposing effect, and is filled chiefly with New Holland plants and Camellias. Of those deserving notice, Banksia Cunninghamii, about 5 feet in height and also in diameter, having about 30 heads of blossoms, had an exceedingly grand appearance. Lotus albidus, a new species, having blossoms of a pure white; the upper part of the flower delicately veined with pink; it appears to bloom freely, and will therefore be very desirable. A new Salvia, from Mexico, was just blooming: in shape and size it has a resemblance to S. fulgens, but of a lighter scarlet, and destitute of the vellous appearance of the flowers of that species; the foliage is much smaller, and very rugose, and the habit of the plant is bushy and spreading. Abutilon striatum was beautifully in flower, as were also the following Hybrid Fuchsias: grandiflora maxima, Standishii, stylosa conspicua, formosa elegans, Chandlerii, and Exemia. The plants were growing much more bushy than might have been anticipated in so elevated a structure, which is chiefly owing to the very perfect exposure to the light. This latter principle has been abundantly provided for in the construction of the house. In the orchidaceous stove, the most interesting plants were the Dionea muscipulæ, or Venus' fly-trap, the leaves of which collapse, on touching certain glands, situate near the rib, and, by an admirable construction, enclose whatever may happen to become its prey; a minute but beautiful species of Dendrobium, with white blossoms, and attached to a piece of wood, presented an interesting appearance; the whole plant being less than three inches in height.

In conclusion, I should observe, that a visit to the Chiswick garden during the summer months, or at one of the fetes, is well worthy the attention of those who may have never witnessed either.

Oct. 9, 1840.

REFERENCE TO PLATE LVII.

BRUNONIA AUSTRALIS. Southern Brunonia.

NAT. ORD. BRUNONIEÆ. CLASS PENTANDRIA MONOGYNIA.

The plant from which our drawing was made, bloomed in Mr. Low's Nursery, at Clapton, during August last. Its native country, as the specific name implies, is New Holland, and therefore requires the protection of a frame or green-house during winter. The blooming season of this plant is rather protracted: this, together with its rich azure blue heads of bloom, show that this plant, under good treatment, would be a very handsome and ornamental object.

It was named by Sir James Edward Smith, in honour of Robert Brown, Esq., of whom it is said, by one of his friends, that he was the first botanist in the world. It succeeds best in a loamy soil, mixed with sand and a little peat earth.

It will readily be conceived, by the habit of this plant, that it is nearly allied to Composite, Campanulacea, Dipsacea, and Globulariea.



op New 19 Postalija

NOTICES OF NEW PLANTS.

ROSCOEA PURPUREA, Purple Roscoea.

Bot. Reg.

NAT. ORD ZINGIBERACEÆ. CLASS MONANDRIA MONOGYNIA.

A beautiful herbaceous plant, from the highest station on the Himalayan Mountains. It has long been known, and frequently introduced to our gardens, but it is rarely met with in cultivation. It is by no means even a greenhouse plant, but a fine half hardy perennial, growing about eighteen inches high, and flowering from the beginning of August to October. It may be increased freely by division of the roots, or by seeds; the latter being sown in a cold frame, the seedlings will flower freely the second season. It is requisite that the roots be kept quite dry when in a dormant state, and that they should have artificial heat and plenty of moisture to start them in the spring.

CATASETUM MACULATUM, Spotted Feelerbloom.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. § VANDEÆ. CLASS GYNANDRIA MONANDRIA.

A species but little different from C. tridentatum, producing handsome green and purple flowers. Dr. Lindley says, "If the cultivator of this species chooses to suspend it from the roof of the stove instead of growing it in a pot, he should be careful to surround its roots with some substance capable of retaining moisture, as itrequires to be kept in a very moist state during the time in which the flowers are forming; and if this is not attended to, they will frequently wither without opening. But the better way is to keep it in a pot, almost dry, until it has begun to grow; and even then water must be given sparingly until the pseudo bulbs begin to form, because at this period too much water will certainly injure the young shoots. In other respects, as regards soil, temperature, propagation, and general treatment, it must be managed in the same way as C. tridentatum, and other plants of this kind.

PERNETTYA MUCRONATA, Narrow-leaved Pernettya.

Bot. Reg.

NAT. ORD. ERICACEÆ. § ARBUTAÆ. CLASS DECANDRIA MONOGYNIA.

The Pernettya Phillyreifolia of the gardens, a very pretty little hardy shrub from Peru. This genus is very subject to die during the hot part of summer, if fully exposed to the mid-day sun. They will grow freely in peat with a little sand; and, if kept in pots, they should be placed in a frame with the back to the south never allowing the sun's rays to pass directly upon them during the summer, keeping the lights on during the day and taking them off during the night. If they are planted out, the situation chosen should be amongst American plants, where the rays of the sun never fall directly upon them, but where they can have plenty of light and air without being overhung with other plants, and not exposed to the extremes of wet and dry. They should never be watered during very dry weather, or it will be almost sure te destroy them; but endeavour to keep them moist by covering the soil with moss during the summer. The genus is easily propagated by seeds sown in the spring in a close frame, but by no means in heat.

STATICE PECTINATA, Comb-flowered Sea Lavender.

[Bot. Reg.

NAT. ORD. PLUMBAGINACEÆ. CLASS PENTANDRIA MONOGYNIA.

A pretty half-hardy or greenhouse perennial, from the Canaries. It grows from one to three feet high, and will flower most part of the summer, if planted out in

the border. It flowers so freely that it generally becomes exhausted, and it should be raised from seeds every other year at the farthest. The seeds should be sown in the spring, and treated like other half-hardy perennials; but as they are subject to damp off during the winter, especially if watered overhead, it is necessary to cover the surface of the pots with silver sand, and to keep them in an airy place, but secure from frost.

DELPHINIUM DECORUM, Pretty Larkspur.

Bot. Reg.

NAT. ORD. RANUNCULACEÆ. CLASS POLYANDRIA TRI-PENTAGYNIA.

A pretty hardy perennial from New California, with violet-purple flowers, very showy. It does not require any peculiar treatment further than what is given to other perennial larkspurs.

ODONTOGLOSSUM BICTONIENSE, The Bicton Tooth Tongue. [Bot. Reg.

NAT. ORD. ORCHIDACEÆ. & VANDEÆ. CLASS GYNANDRIA MONANDRIA.

A very pretty species from Guatemala, with green sepals and petals spotted with purple and a light purple lip. It will succeed well with the same treatment as the Oncidiums.

BARRINGTONIA RACEMOSA, Raceme-flowered Barringtonia. [Bot. Mag.

NAT. ORD. BARRINGTONIEÆ, CLASS ICOSANDRIA MONOGYNIA.

A very splendid plant, producing long racemes of large pink flowers, and undoubtedly worthy a place in every collection. It is a native of the Molucca Islands, where it grows to a stout timber.

MONACHANTHUS BUSHNANIS, Mr. Bushman's Monk Flower. [Bot. Mag. NAT. ORD. ORCHIDACE.E. CLASS GYNANDRIA MONANDRIA.

A beautiful species, with rich yellow green flowers, the inside of the lip and the apex of the middle lobe of a deep golden brown.

PIMELEA NANA, Dwarf Pimelea.

Bot. Mag.

NAT. ORD. THYMELACEÆ. CLASS DIANDRIA MONOGYNIA.

A pretty little species, from the Swan River Settlement in Australia. It is allied to P. longiflora, but is easily distinguished from this by its much more humble growth, its single nerved leaves, and its exserted stamens and style: It will probably be short lived.

CALECTASIA CYANEA, Bright Blue Calectasia.

Bot. Mag.

NAT. ORD. JUNCEÆ. CLASS HEXANDRIA MONOGYNIA,

Undoubtedly one of the most beautiful of the floral productions of the South-Western Coast of Australia. Sir William Hooker says, "We figure it on account of its great beauty, a beauty which is scarcely altered by drying, for the form and colour of both leaves and flowers is truly of that kind called everlasting; and partly with the hope that our cultivators may be induced to import this lovely plant as an ornament to our greenhouses. Nothing can exceed the richness of the bright purple perianths and the contrasting deep orange-coloured anthers. It grows in saudy soil among shrubs,"

ELÆODENDRON CAPENSE, Cape Elaodendron.

Bot. Mag.

A handsome evergreen with small white flowers, but not sufficiently hardy to endure our climate, even with the protection of a wall. There are three varieties in cultivation, all free growing, and differing chiefly in the breadth of the leaf and depth of the serratures; but it appears that the plant in common cultivation, as Elæodendron capense, is nothing else but a narrow leaved variety of the common Bay.

CYRTOCHILUM MACULATUM, VAR. ECORNUTUM, Spotted Cyrtochilum, hornless var. [Bot. Mag.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

A slight variety of C. maculatum. The flowers are prettily marked, but destitute of fragrance. It is worthy of a place in every collection.

BLANDFORDIA GRANDIFLORA. Large Flowered Blandfordia.

Paxton's Mag.

NAT. ORD. LILIACEÆ. CLASS HEXANDRIA MONOGYNIA.

An evergreen herbaceous perennial, with tuberous roots, producing a scape from one to two feet high, crowned with large bright orange red blossoms. It appears that nothing is correctly known as to the direct origin of this species, but there is little doubt but it is a native of New Holland, and consequently requires a greenhouse. This plant being an evergreen, the treatment generally bestowed upon Cape bulbs will not be suitable for it. From its requiring water all the winter, more heath-mould should be employed than is generally given to bulbs, and it should be kept in a light airy situation during the winter. It is said to thrive most luxuriantly if planted in the border of a conservatory.

THUNBERGIA GRANDIFLORA. Large Flowered Thunbergia.

[Paxton's Mag.

NAT. ORD. ACANTHACE E. CLASS DIDYNAMIA ANGIOSPERMIA.

A plant which has for some time been known in collections, but seldom grown with success, and mismanagement has got it into disrepute as a shy bloomer, &c.; however it is to be hoped the following observations on its culture by Mr. Paxton, will enable every attentive culturist to produce its splendid flowers in perfection:—

"Having examined with some care plants of T. grandiflora which bloom abundantly, and others on which a single blossom is rarely to be witnessed, it is obvious to us that the two states are brought about solely by attention or inattention to some very trifling particulars. First, it should be potted in a compost, with some pretensions to be called rich, but not of an extremely nutritive description; two parts of maiden loam, and the remainder of heath soil, leaf mould, and sand, will, if mixed, constitute an excellent material. Next, the pot to which it is transferred, must be exactly of the size suited to its wants, and neither so large as to leave more than three quarters of an inch between the roots and its edge, nor so small as to check the extension of the rootlets, unless the specimens be too exuberant. Lastly, each plant ought to have an open space of at least half a foot, on all sides of it, that the influence of the external aerial agents may be duly received, and that it may not relapse into a weakly state, with long sickly branches bare towards the bottom." Cuttings of the young wood taken off in spring and placed in sandy loam, under a hand glass in heat, will strike root freely.

GLADIOLUS INSIGNIS. Remarkable Corn Flag.

Paxton's Mag.

NAT. ORD. IRIDACEÆ. CLASS TRIANDRIA MONOGYNIA.

A handsome hybrid, with long narrow leaves, and apparently partially drooping flower stalks, on which the blossoms are borne chiefly on the upper side. The flowers are of a rich crimson hue, with a dash of bluish purple in the centre of the lower segments of the perianth. Messrs. Lucombe, Price, and Co., say "It is one of the finest hybrids we are acquainted with. It flowers profusely when planted out in a bed composed of two-thirds sandy heath soil, and

the rest rich loam. We should advise the potting of the bulbs early in November, keeping them in a cold frame during winter, and planting them out for flowering early in May. Treated thus, Gladiolus insignis is one of the greatest ornaments of the flower-garden in the months of June, July, and August.

CATASETUM DELTOIDEUM.

"In a former volume of this work it has been related how the species of orchidaceous plants, which was called Myanthus barbatus, with a revolute bearded lip, and a column with two fillers, changed by a marvellous metamorphoses, into what was called Monachanthus veridis, thus proving not only that the supposed genera Myanthus and Monachanthus are the same, but that they are mere forms of Catasetum itself. A new case of this form of variation previously unheard of and unsuspected in the vegetable kingdom, has been observed by unheard of and unsuspected in the vegetable kingdom, has been observed by Mr. Dunsford, who has brought me a scape of Catasetum deltoideum, figured at folio 189 of this work, in a similar state of alteration. The length of the raceme is much reduced; the sepals and petals retain their form and colour, but the labellum, instead of being arrow-headed, flat, deep purple, toothed at the base, and placed in front of the flower, has become of exactly the same form as that of Monachanthus veridis, hooded, undivided and of a dull green colour, tinged with dull purple. The column too has in like manner lost its cirrhi, has shortened, and its lengthened beak has also disappeared."

OPYELIA PURPURACENS.

A pretty herbaceous plant, with starry spring flowers; presented by the East India Company, and raised at the Horticultural Society's gardens. It is expected to be hardy, and will probably prove annual.

QUERCUS ACUTIFOLIA.

- Q. RETICULATA.
- Q. CRASSIPES.
- Q. SPICATA.
- Q. MEXICANA.
- Q. GLAUCESCENS.
- Q. SIDEROSYLA.
- Q. LANCIFOLIA.
- Q. PETIOLARIS.

All the foregoing are Mexican oaks, and recently raised, we believe, in the Horticultural Society's garden.

MILTONIA RUSSELLIANA, Duke of Bedford's Miltonia. | Paxton's Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This species is undoubtedly inferior to some of the group in the size of the flowers and the brilliancy of the colours; but the difference is not so great as to render it unworthy of notice. The liveliness of the verdure of its leaves and pseudo-bulbs, and the fine purpleish lilac of its lip, helps to compensate for other defects. The flowers of this interesting species first made their appearance in England at the gardens of his Grace the Duke of Bedford, at Woburn Abbey, whither it was sent by the Hon. Captain J. Roos, R.N., in 1835; having been obtained from the collection of Mrs. Moke, at Pejuca, near Rio Janeiro. Mr. Paxton observes, "It is no less observable than encouraging to the superior culturist, that Miltonia Russelliana is a species which will abundantly repay him for proper attention, as there are not many Orchidaceæ on which the effects of good treatment are more apparent. Plants in the collection of his Grace the Duke of Devonshire, at Chiswick, have been generally acknowledged to have developed themselves to greater perfection than has been elsewhere obtained. Notwithstand-

ing this, the commonest system of management has been adopted. They are potted every spring in shallow pots, half filled, with a smaller inverted pot and drainage, and the rest made up with small pieces of fibrous heath soil blended with potsherds. Their growing season is from the end of spring to the beginning of autumn; at which period they are freely watered at the roots and syringed over the leaves, and a moderately high temperature is sustained. At the completion of their growth the heat of the house is reduced, and the amount of water lessened, when they will commence protruding their flower spikes, which are borne from the base of the newly perfected pseudo bulb. This last must be fully ripened ere it will produce flowers, and hence the value of withholding moisture after the accretions are all made. Propagation is performed by removing one of the foremost pseudo-bulbs in the usual way."

REVIEWS.

The Flora of Yorkshire, by HENRY BAINES, Sub-Curator to the Yorkshire Philosophical Society. Longman & Co.; Leyland and Son, Halifax.

This is a Local Flora of no common interest, and has been got up at considerable cost, both of labour and money. In the preface we are told that the general catalogues of British Plants, omit all notices of many of the rare species found in this county. It is further stated that

"In addition to these considerations, the circumstance that the Author has spent all his life in Yorkshire, and prosecuted Botanical researches in it for nearly thirty years, may be thought a sufficient apology for this entering on a task which could only be properly performed by a resident Botanist, with the assistance of kind and diligent friends."

"He might, however, have been compelled to delay for years the preparation of this work, but for the circumstance that his connexion with the Yorkshire Philosophical Society placed at his disposal, probably the most perfect herbarium of Yorkshire Plants ever formed, comprised of the united collections of three most eminent Botanists, James Backbouse, Esq., of York, the Rev. James Dalton, of Croft Rectory, and William Middleton, of Poppleton Lodge."

At the commencement of the Book there is a Map of Yorkshire, exhibiting the principal districts, as the *Holderness Wolds*, &c., with a section of the Magnesian Limestone, commencing at the east of Sheffield, and terminating near Richmond, at the northern point. In speaking of, and referring to, the Localities, the Map will be found of great value in perusing the Book. Under the head Physical Geography of Yorkshire, we are informed that

"The mean temperature of York, which is about 50 feet above the sea, is very nearly 48 degrees of Fahrenheit, and there is little variation in different parts of the County, except what unequal elevation above the level of the sea occasions. The effect of this on Mickle Fell, the highest mountain in Yorkshire,

162 REVIEWS.

may be estimated at 8 degrees of Fahrenheit; so that the extremes of mean temperature in Yorkshire, vary from 40 degrees to 48; from similar data we may state that the range of highest mean daily temperature in the shade in July is from 54 degrees to 62; and the range of lowest mean daily temperature in January at 25 degrees to 33. The most prevalent winds are south easterly during all the year, excepting about a month after the vernal equinox, when in all the eastern parts, north easterly winds prevail. The quantity of rain falling in York, is 24 inches, and it is below the average of the County, of which the western parts are the most rainy."

We also perceive that this catalogue contains 1002 Flowering Plants, three of which are peculiar to Yorkshire, viz. Arabis hispida, Dryas octopetala, and Juneus polycephalus; and Cornus suecica, which is not peculiar to the County, but flowers nowhere else in England.

Twelve, of which a list is given, attain in Yorkshire their southern limit.

Thirty-seven, of which a list is given, attain also in this County their northern limit.

There is also a list of fifty-six plants found in the north-western district only.

The plants are arranged according to their natural system, and we shall give the following as a specimen of the mode in which the individual plants are treated. The note appended to the plant in question, however, is somewhat longer than that usually given.

ORDER LIII. GENTIANÆ.

GENTIANA VERNA, SPRING GENTIAN, MAY 24.

In mountainous situations above Middleton, in Teesdale, and on the southeast part of Cronkley Fell, on the Yorkshire side of the Tees.

This little plant, one of the most beautiful of Flora's gems, will grow well in pots, or the open border, if planted in a mixture of fresh hazel-loam and pebbles, even in the smoke of a city. On the Durham side of the Tees, thousands of acres are studded with its bright blue flowers. No district of the same extent in the kingdom will reward the Botanist with so rich an harvest as Teesdale. Beginning at Gretta Bridge, you pass through an avenue of lofty elms to Rockeby Park, the seat of J. B. S. Morritte, Esq.; in the Park are many rare plants, with which Mr. Smith, the Gardener, is well acquainted, and is at all times ready to point them out to strangers visiting that beautiful place. The walk from Rockeby to Barnard Castle, by Eggleston, is interesting to the Botanist, He may find Ribes petræum, Geranium lucidum, Gagea lutea, Adoxa muschatellina, Lathræa squamaria, Gallobdolon luteum, &c. &c. From Barnard Castle to Middleton, is a beautiful walk of ten miles; you pass through Lartington, the residence of Henry J. M. Witham, Esq., Author of the Internal Structure of Fossil Vegetables, who possesses a most interesting Museum, fitted up in a superior manner for every department of Natural History. A little way further you come to Cotherstone, near which, at the junction of the Black Beck with the Boulder, grows the rare Saxifraga Hercules, Gagea lutea, Myrrhis odorata, Saxifraga aizoides, S. granulata, &c. From Middleton to Winch Bridge, where a chain bridge crosses the Tees, on the rocks which here confine the impetuous river, the Botanist will find the Potentilla alpestris, Pyrus aria, and the ground studded with flowers of

Trollius Europæus, Potentilla fruticosa, Viola palustres, Primula farinosa, Rubus saxatillis, &c. From Winch Bridge to High Force one mile. Here is a very comfortable public house, which has now accommodation for carriages and horses, kept by a person of the name of Thomas Scott, who is well acquainted with the localities of all the plants in the neighbourhood; from High Force to the top of Cauldron Snout, may be found the following plants, Gentiana verna, Arbutus uva-ursi, Gallium boreala, Paris quadrifolia, Sedum telephium, Lycemachia nemorum, Hieracium Lawsoni, Thalecum alpinum, Carex capillaris Hiphocrepis comosa, Bartsia alpina, Topheldia palustris, Saxifraga aizoides, S. hypnoides, and S. stellaris, Kobressia caricina, Draba incana. Woodsia ilvensis, Lycopodium alpinum, Cryptogramma crispa, Aspidium lonchitus, &c."

Such is a specimen of the mode of treating individual plants which possess interest. Of course there are many which neither require nor deserve any notice whatever, beyond that of recording the name and their localities.

There is at the end of the work a copious ADDENDA, containing several interesting plants, such as Stipa pennata, Asarum europœum, &c.

There is an Index to the Natural Order, and one to the Linnæan arrangement of the genera. There is besides an Alphabetical Index.

It affords us no small pleasure in giving our testimony in favour of this Flora. We can vouch for the Book being the result of personal investigation, and we know of no one in Yorkshire so well qualified as Mr. Baines to have undertaken such a work. Nor is his scientific acquirements limited to that of Botany; he is the sub or working Curator of the splendid Museum at York, and is not only a superior practical Botanist, but is familiar with the sciences of Entomology, Ornithology, and Mineralogy.

To Botanists resident in Yorkshire this Flora will be most valuable, and will supply a mass of information, especially with respect to the localities of Yorkshire plants, such as was previously unattainable; it will, therefore, have a general interest, and ought to be in the possession of every one who feels the least interest in the history or knowledge of British plants.

MISCELLANIES.

At the annual meeting of the West Riding Geological and Polytechnic Society held at Wakefield on the 5th of October, an interesting paper was read by the Rev. W. Thorpe, of Womersley, on the Agriculture of the West Riding of Yorkshire, considered geologically, which gave rise to a discussion, in the course of which various remarks were made relative to the peculiar flavour given to apples which are grown on red sandstone soil; and it was observed that in Devonshire, where that kind of land prevailed, the apples grown produced either a stronger body, or a higher flavour, than any other, and the cider was consequently of a superior quality.

A Constant Subscriber has been anxiously expecting the promised description of the Fuschia stylosa conspicua, figured in the Floricultural Magazine for June last, and hopes the Editor will give it as soon as possible; and if the six new Fuschias, offered for sale by W. May, were figured, one occasionally, W. May would find it would give amateurs at a distance a desire to purchase. Your Constant Subscriber is pleased to see some Pelargoniums figured, and shall add, if the celebrated growers were to have their new ones occasionally figured, many amateurs would be more likely to purchase than from a printed list.

[The Fuschia in question is, when well grown, very handsome; the habit is npright, and the foliage much smaller than the fulgens, and larger than any of the old varieties. The flowers are rather large, with stamens, style, &c. projecting.]

An apple was plucked from a tree on Saturday, October 10th, belonging to Capt. Mettam, of Farndon, near Newark, which measured 13\frac{1}{2} inches in circumference, 15\frac{1}{3} from stalk to core (\frac{1}{2}) and weighing 18\frac{1}{2} ounces.

GIANT CLOVER.—A specimen of the gigantic clover of Bokhara, Tartary, grown in the garden of Mr. M. Saul, has been sent to us for inspection. The stalk from which it was taken is 12 feet high; the seed stems are about 4½ inches long, and contain each about 60 seed pods, each pod containing two seeds. The clover is cut every month in Bokhara for fodder, and out of the stem a hemp is produced. From the specimen submitted to us, the clover seems well adapted for the production of hemp, being remarkably strong and tough in the stalk. Our readers will find no difficulty in obtaining a few seed pods from Mr. Saul, through the post, as he charges nothing for the pods, and desires that the clover may be tried in different parts of the country.—Lancaster Guardian.

WISTARIA (OR GLYRINE) LINENSIS.—A magnificent specimen of this plant, 180 feet long, and covering about 1,800 square feet of wall, has been for some time an object of great interest in the garden of the Horticultural Society, where hundreds of persons have visited it and admired its piles of lilac-coloured fragrant flowers. The following little calculation will serve to shew how wonderful is the evidence afforded by this single specimen of the creative power of nature. The number of branches was about 9,000, and of flowers 675,000;—each flower consisting of five petals, the number of those parts was 3,375,000. Each flower contained 10 stamens, on the whole mass of flowers 6,750,000. Each ovary contained about seven ovules, so that preparation was made for the production of 4,050,000 seeds; for the purpose of fertilizing which, the anthers, if perfect, would have contained about 27,000,000,000 pollen grains. Had all the petals been placed end to end, they would have extended to the distance of more than thirty-four miles.—Botanical Register.

With the view of adding interest to your Magazine, permit me to suggest what I consider would be an improvement; namely, to allow and invite your correspondents to propose and discuss questions of interest and importance, answers to which should be solicited from every quarter. As an example of the kind of query I mean, I would propose the following:—"In what does the disease called canker originate in the melon and cucumber, and what is its most efficient cure and the mode of applying it?

[We quite concur with the preceding remarks, and shall feel obliged to any who may take an interest in this matter, and favour us with their views of

the above query, and also those who may propose questions for discussion This is the form in which the mysteries of the art of gardening, and, indeed, of every science whatever, become simple matters of fact, which, by the concurrent testimony of practical men are rendered clear, comprehensible, and obvious to all.]

SIR,-I find great difficulty in producing, on a small green, of six or eight fancy shaped beds, of about ten or twelve feet superficial contents, a succession of flowers. Making frequent changes of potted plants, I find troublesome and expensive, and the trampling on the turf very injurious to it, and the plants do not grow so well as when planted in the border. Having observed the readiness with which your interesting and useful Magazine affords information enquired after, I am induced to seek to be relieved from my perplexity, through the same medium; the first and last months of the year especially try me. My flowers principally consist of Crocuses, Violets, Primroses, of different colours, Pansies, (to which I would add, for the first months, in any way that would be recommended, winter Aconite, Cyclamen coum, Hepatica triloba, Arabis albida, Draba azoides Cyclamen ververna, Adonis vernalis, or others). I have a tolerable stock (for my space) of Antirrhinums, Dianthus barbatus, Geums Mimulus, of sorts, Calceolarias, in variety, Petunias, ditto, Verbena Tweediana, and the two scarlets, Phlox Drummondii, Fuchsia globosa, Grasilis, Longislora Microphylla and Coccinea, Salvias patens, fulgens, Grahamii and Coccinea, Lobelias, and Oxalis floribunda- from the long continuation in bloom of these plants, the latter especially, with its vivid colours, they would appear very desirable for an exclusive bed, Convolvolus, being made to festoon over it, giving it a pretty effect, at least, so I should think. May not small stones be laid over the beds of such plants as this? Would it not prevent the flowers from being dirtied in wet weather? Would this injure Verbenas after pegging them down? Allow me to suggest the desirableness of stating to, as well as from, what months plants flower. Thus plan as the following for effecting my object-any improvement upon it, I should be most thankful to have given me. For one bed, prepare ground the first week in November for crocuses, snow flakes, and squills. First week in March, between these set rooted plants to be covered with the pots (inverted) out of which they are turned to protect them from frost and heavy rains, of Nemophylla insignis. First week in July, well dry the bed and prepare it for Calceolarias, to be turned out of pots. Another bed .- First week in September, put out young well rooted Pansies, introducing two or three old Ribes sanguinea and single wall flower, all to be taken out in June and planted with Petunias. A third bed-Winter Aconite, Cyclamen coum, Violets, and Rockets, turned into beds after Mimulus is entirely over; these removed to the Nursery in June, and again plant Mimulus, Muschata, light Yellow, Mimulus Cardinalis and Greory's Seedling.

A LOVER OF FLOWERS.

[Our Correspondent is evidently a lover of flowers, and we regret, that owing to the difficulty of comprehending some of the names of the plants referred to, we have been under the necessity of suppressing some of them. We shall feel obliged if some of our florist friends will answer this.—Ed.]

The following remarks were sent us by an intelligent Gardener in Yorkshire, who says, "I have been out for the last week, taking about eighty miles of a tour. I have seen many fine specimens of orchidaceous plants, especially at Mr. Barker's, of Birmingham. The best collection and best grown I think of any that I have

seen, some of those in bloom, were Epidendrum pastoris, Acropera intermedia Myanthus intermedia, Zygopetalum rostratum, Maxillaria cristata, Odontoglossum Insleyana (!) Phaiseuopsis amabiles, (this is a very rare and splendid plant,) Odontoglossum Rossii, Cattleya labiata. Besides these, many others were in fine bloom, but want of time prevented me from noting them down."

Rubus.—These and many other varieties, for it appears almost impossible to find real specific distinctions in many of the reported species of this most intricate genius (rubus,) may be met within the more uncultivated districts of the country, and to any one possessing the hair splitting propensities of the German botanists, will be a source of much amusement, and no small perplexity. The writer of this note during the summer of 1837, and in a district peculiarly favourable to the pursuit, paid much attention to them, without being able to arrive at any satisfactory conclusion; his observations, however, led to an opinion not only that they hybridise, but that soil and situation have considerable effect in producing much variation of pubescens on the flower stem and calvx, and that the leaves are frequently influenced by similar circumstances. These remarks are not to be understood as applying to R. ideus, Casius saxatilis, or chamcemorus.—Baines's Yorkshire Flora on the Rubus.

QUERY.—I have heard Gardeners strongly object to Arnott's Stoves in a Greenhouse, on account of the dryness of air which it produces, in spite of all attempts to produce sufficient evaporation. I cannot help taking this opportunity of congratulating you on the great improvement visible in the getting up of the last number of your Magazine; it has so long been a favourite and constant occupant of my writing table, that I am delighted to see my old friend come forth in a form and dress that may make it a fit occupant for any Lady's drawing room table.—VIOLETTA.

[We insert the preceeding remarks, as they bear additional testimony to what must necessarily be the general opinion with respect to Arnott's Stove; yet, although it can never be brought into general use in early-forcing, or under any circumstances where the temperature requires to be kept constantly high. Arnott's Stove will be found exceedingly valuable in producing a slight rise of temperature, and this is all that is needed in small Greenhouses, such as are often connected with the residences of private families, and more especially in the vicinity of large towns, where such structures are common. In cases of this kind, it is most frequently that when heat is applied, it is to repel damp, which accumulates in Greenhouses from the frequent application of water, as it is to prevent the effects of cold; and, therefore, Arnott's Stove is by no means unlikely to be useful in such cases. Indeed, we know where it has been applied with excellent effect in this way and it is certainly very cheap, compared either with common ones or hot water pipes. We must not, however, be misunderstood. We cannot conceive it possible ever to apply this Stove on its present principle, so as to render it suitable for keeping up a high temperature like that required for plant stoves, pine stoves, or the early forcing of Peaches or Grapes. Violetta will perceive the desideratum to which she refers, is in part, we trust supplied.]

MONTHLY CALENDAR.

FLOWER GARDEN.—Protect herbaceous plants in the borders, by covering the roots with ashes, rotten tan, &c. Some of the more tender kinds will require a hand-glass, which should be kept over them only in wet or severe weather. Alpines, primulas, and other choice plants in pots (if not previously done) should now be plunged in a cold frame or pit, in ashes or sawdust. Cut off and remove all decayed flower stems; but transplanting herbaceous plants, and digging amongst them, is better deferred till spring. Rake and sweep' leaves from the lawn and walks, repair gravel walks, and roll them. Prepair composts, manure, and simple soils, by turning frequently, that the frost may penetrate them. Much depends upon composts (for florists' flowers in particular) being sweet and mellow, and this can only be obtained by time and frequent turning.

In wet weather, prepare covers for tender and half-hardy shrubs, these may be made of rough wicker work, and covered with fern, heath, bark, &c. Thickness of the cover is not so much an object as keeping the plants dry. Prepare rods, poles, stakes, labels, and numbers, wash and sort pots, &c.

PLANT STOVE—In the plant stove, little can be done at this season; the principal thing is to have as regular a temperature as possible, at a medium of about 60 degrees. To obtain this, great attention is required, especially if the house is heated by flues, the increase of temperature from which, after they are heated to a certain degree, is often such as to overheat the house, and consequently scorch the plants; hence the superiority of hot water, from which such an increase of temperature never occurs. Remove all dead leaves, moss, from the surface of the pots, &c. Water, carefully and sparingly only, such plants as are dry, and give a moderate supply of air when the weather permits.

GREENHOUSE.—The more air you give, the more healthy the plants will belt the morning is fine, and not frosty, the sooner air is admitted, the better; when frosty, as soon as the sun is on the house; and it should be shut up early in the afternoon, not later than three o'clock. No fire is required, except the night is likely to be frosty, or the house damp by continued wet weather. The plants should be carefully looked over, and water given to none but such as are really dry, and to them sparingly, taking care not to spill or throw any about the houses—from nine to twelve in the morning is the most proper time for watering at this season. Remove all dead leaves; and such pots as are becoming green on the top, should have the moss removed, and the surface stirred with a flat stick, being, careful not to injure the roots. Apply fresh soil when the roots are exposed, and be sure to use the same as they are growing in. In the pits and frames without artificial heat, nothing can be done but to give all the air possible; when the weather permits, water carefully and sparingly; remove dead leaves, moss from the pots, &c.

PARK AND PLANTATIONS.—Prepare for planting, by draining, fencing, and trenching. Plant only in fine weather, except thorn and other hedges, and large trees, with balls of earth. Thin, fell, and prune deciduous trees, but not the barking kinds. Plash and repair hedges, cut copse wood, grub out old stems, &c. Operations on ground, water, artificial rock-work, &c., may now be carried on; but nothing should be attempted where mortar is required.

If possible, the Icehouse should now be filled. Prepare it by cleaning out all the old straw and refuse. The ice should be broken small before it is put in, and

well rammed down after it is in; a good watering with hot salt and water to every layer of a foot thick, will be found to make it keep much better; be careful to close the inlet well with straw after the house is full. To prevent the house being opened again for some time, a supply of ice for present use may be kept, by laying a quantity in a situation where it will be sheltered from the wind and sun, covering it with a layer of straw and a good thickness of sand or earth, to exclude the air; care should be taken to cover it well up again after any is taken away.

KITCHEN AND FRUIT GARDEN.-Peas, beans, and radishes, may be sown, but the result may be considered uncertain. Cabbages, and others of the tribe intended for seed, may yet be transplanted. In fine weather earth up peas beans, &c., or cover them nearly over, (leaving the top only just out,) with ashes, rotten tan, or leaf mould. Protect parsley, endive, &c., with fern; artichokes, asparagus, potatoes, (left in the ground, to be taken up as wanted), with litter. Tie up chardoons, endive, &c. Take up Jerusalem artichokes and other edible roots, and pack them in sand in a cellar or dry shed; Cauliflowers, &c., if in danger of being spoiled by the frost, should be taken up and laid under cover, the roots being covered with sand or any other thing to keep them from the air. Trench, ridge, and dig, turn composts, manure, &c.; prepare borders, and renew such as are exhausted, with fresh earth. Apples, pears, gooseberries, and currants, may now be planted, they should be well mulched, which will do much to ensure their future prosperity. Prune, but not in severe weather; peaches and apricots, are best deferred till spring. Partially unnail and untie trained trees, and wash the branches with any acrid glutinous fluid. Mushrooms, if on ridges out of doors, will require to be well covered with hay, straw, or long dry stable litter and mats; this covering should be removed when wet, and fresh applied, being careful not to expose the beds to the air longer than is absolutely necessary. To mushrooms in the house give air in fine weather, keep a moderate covering of hay on the beds, and water in moderation, but by no means use water which has not the chill off. Fine soil should be frequently applied to cover the spawn that rises to the surface of the beds and the young mushrooms; the house should be kept moderately damp, and a temperature of about 60 degrees will be found sufficient.

PINE STOVE.—Every stimulus to vegetation should now be moderated; give a little air when the weather is fine, keep the house moderately moist, and endeavour to keep as regular a temperature as possible, at a medium of 65 deg.

PEACH HOUSES, VINERIES, &c.—To these air should be given whenever the weather permits; if it can only be admitted for a few minutes, it should be attended to. If the weather is dull and wet when the peaches, &c. are in bloom, and air cannot be given, agitation of the atmosphere of the house, by means of a piece of board, or any other thing, will be found beneficial; or, what would be better, the application of Mr. Penn's principle of circulating air.

In the hot beds and pits, Cucumbers will require attention. Give air, more or less, every day; and if a little be left on all night it will be better. Attend to the covering; and if there is danger from frost, use a quantity of dry hay or straw next the glass; and be careful, in putting on the mats, that they do not hang over the lining so as to draw the steam into the bed. Asparagus, straw-berries, &c., should have air at every possible opportunity, and a tolerable supply of water. Throw out, shake up, and renew linings. Turn over and prepare dung for new linings and beds.

Sow small Salad, Radishes, and Lettuce in cold pits or frames, and give them abundance of air in dry weather. Protect them, in severe frosts, by mats, &c.

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LVI.-JANUARY, 1841,

REMARKS ON MR. JOHN PENN'S METHOD OF WARM-ING AND PRODUCING A CIRCULATION OF AIR WITHIN HOT HOUSES,

BY THE EDITOR.

We visited the garden of John Penn, Esq. Civil Engineer, at Lewisham, on Friday, the 2d ult., and spent some time in examining his mode of applying hot water as a medium of conveying heat to horticultural structures of various kinds. We found the same boiler and apparatus generating heat for six divisions, or distinct and mostly detached hot-houses, consisting of Vineries, Pine Stoves, Plant Stoves, Green-houses, and an Orchideous House. The vines and plants, indeed every thing affected by the artificial temperature, produced by this system of heating, appeared in high health and luxuriance.

We have also, within the last few days, seen it at Mr. Willmet's, of Isleworth, where it has been well tried during the winter of 1839-40. Mr. Willmet's foreman informed us that it had answered most completely, and that there was at all times, whenever the heating apparatus was in use, a constant and powerful circulation of air, continually in motion. Our own opinion of Mr. Penn's mode of circulating air in hot-houses, or rather his discovery of the principle by which this is effected, if not of more importance to the horticultural world, than the discovery of the principle of circulating hot water, is at least of equal value; and by applying these two principles in the way which Mr. Penn has adopted, he brings into action two agents, capable, no doubt, of being applied in a great variety of ways, but combining within themselves all that appears of essential importance in procuring an artificial temperature, fitted for the vigorous growth of even the most tender and delicate plants. not only supplied, but the air of the house is made to circulate so

2 A

that the leaves of the plants may be seen in constant motion. Indeed every hot house heated on this principle, may very properly be said to have a complete atmosphere of its own, dependent on natural agents for light only, having within itself heat and water, with air in constant motion.

Mr. Penn has thus the merit of introducing to the horticultural world a discovery of incalculable importance with respect to the cultivation of all plants confined within an artificial temperature, but especially such as are reared with the view of producing eadible fruit, as that of the pine apple, the grape vine, the fig, with the various stone fruits, such as the peach and nectarine, plum, cherry, apricot, This system, we think, cannot be too highly valued, viewing it as a practical gardener, or as an amateur would do, who, although neither might be able to account for, or explain the chemical changes effected upon the air by its continually revolving within the house; yet every one, whether practical gardener or amateur, having under his care the management of plants, whether for the purpose of producing fruit, or flowers only, can at once appreciate the advantages of being able to submit his plants not only to the required temperature, but when, in addition to this, he has a constant and even rapid change of air in continual operation, a desideratum is supplied in the management of hot houses of no ordinary importance.

Mr. Penn has shown that the principle is applicable both to horticultural and floricultural purposes, and gardeners can appreciate its value. To suppose that this system is applicable only in connection with the plan which Mr. Penn has adopted for diffusing heat, that is, with his system of applying hot water, would be taking but a very contracted view of the question. It is not only applicable to Mr. Penn's system but to every system and variety of system hitherto devised for the generation and diffusion of caloric, in whatever form it may be produced, and it will, we have no doubt, soon be applied in various ways, and improvements, important ones too, will be effected. In the early forcing of cucumbers and other plants equally tender, susceptible as they are of the slightest change of temperature, and yet dependent on change of air for health and even for their existence, this system may be applied so as in a great measure to obviate many of the difficulties, and not only lessen the chances of failure, but very greatly improve and strengthen the plants by subjecting them to a change of air, without the common risk of injury arising from the opening of the lights.

In order, however, to be better understood, and to render our remarks less liable to misconception, as well as to illustrate with greater clearness the infinite variety of modes by which this very simple and beautiful principal may be applied in the heating of hot houses.

Fig. I, is a representation from recollection of Mr. Penn's orchideous house. We prefer taking this as an example; first, because the structure is now in operation, at his place, at Lewisham; and secondly, because we believe Mr. Penn is so liberal, as to permit it to be seen by any respectable person applying for permission to do so. Our first remark with respect to the mode in which the heated air is made to circulate in this house would be, why are the hot water pipes placed in the centre of the house. This is one of those questions which would be amongst the first to suggest itself to the practical gardener, and his reason for making this enquiry would be, that no fact is brought more clearly and forcibly before him, than that every hot house, or greenhouse, suffers most from cold in those parts where the glass comes in nearest contact with the earth (we, of course, speak of those only, the temperature of which is maintained by artificial heat). To those who are familiar with the management of hot houses, this will at once be obvious, and but few others will find it difficult to understand why it should be so, when it is remembered, that wherever heat is applied, the particles of air submitted to its influence, expand, and their specific gravity, being thereby reduced, they are forced upwards with greater or less rapidity, in proportion to the amount of caloric which they may have absorbed, and the density of the air by which they are surrounded. The highest part of every hot house is, therefore, necessarily the hottest, and the lowermost parts, excepting those in immediate contact with the heating apparatus, is, invariably, the lowest in temperature. *

. That this simple fact is not always borne in mind, even by practical and scientific men, was illustrated by a circumstance which occurred in the erection of the great Domical Conservatory, which was built some years ago, at Bretton Hall. The form of the Conservatory was circular, the lower dome was surrounded by an upper one, supported on a series of strong cast iron columns, immediately within this circle of columns was a foot path, under which was fixed steam pipes; these pipes were in contact with the base of the columns, and in order to keep up the temperature of the upper dome, ventilators were prepared in the columns, and the heated air from the steam pipes was to be conducted upwards through these hollow and massy pillars, just in proportion as it might be required to maintain the warmth of the upper dome. It is needless to say the ventilators were never called into requisition for this purpose, as the only part of the house where it was at all difficult to repel the cold, was around the base of the lower dome, and, notwithstanding there were eight steam pipes in close contact with the lower rim of glass, it was, on many occasions, quite impossible to prevent it becoming coated with ice. This was the case only so far upwards as the glass and frame work of the house maintained an upright position, the sloping part of the roof was always free from ice, and the temperature of the upper dome was invariably higher than the lower one, often varying as much as from ten to fifteen degrees, thus showing very clearly the tendency of rarefied air to ascend, and the desirableness to provide for this in making arrangements to supply an artificial temperature.

From all that experience has taught us, we should, therefore, prefer the arrangement and disposal of the hot water pipes as indicated by Fig. 2. By this mode, the heated air would be generated and necessarily the strongest in that part of the house where it was most required. It would ascend and come in contact with the bottom of the glass frames, and would continue to travel upwards in contact with the under surface of the glass. By passing upwards so near the glass, the air would be considerably lowered in temperature before it reached the highest part of the house, and thus it is fair to suppose the temperature would be more equalized throughout the house.

In No. 1, the heat is generated in the centre of the house, and ascends at once to the highest part of the roof, and cannot, therefore, diffuse itself freely throughout the lower part of the house, except as the particles of air become more or less cooled, and are forced downwards.

In No. 2, the diffusion of the heat is a natural process, by carrying the pipes round close to the side walls, then it insures the strongest heat being kept up, where it is always the most difficult, and whenever the heat is strong enough in these parts, it is certain to be so in the centre, and towards the upper part of the roof.

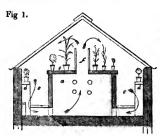
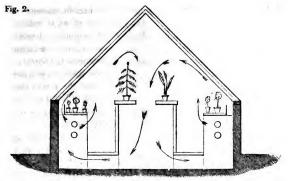


Fig. 1. a. is the chamber formed of brick-work, built close, with openings about nine inches square, and having placed over them wood boxes or shafts; f to conduct the heated air through the foliage of the plants which are stationed on the top of this chamber. As indicated by the arrows, it ascends to the highest part of the roof, and then descends

under the floor or path c. c. and u.u. and again passes through hot water pipes, and thus it continues its revolution so long as artificial heat is maintained.

d. is a platform or shelf for setting plants upon.

Fig. 2. represents a plant stove on the same principle as Fig. 1, but having the hot water pipes carried round near the side walls instead of being in the centre of the house and confined in a close chamber. In Fig. 2 the heat is generated precisely in that situation where, in its ascent upwards, it must pass along the under surface of the glass, so that, in fact, the house may be said to be enveloped within a coating or stratum of heated air. The hot water pipes are under the side platforms, and the air descends through the brick chamber and



through the floor or foot path. The circulation of the air as will be understood by the direction of the arrows, is reversed from that of Fig. 1, and where an equal diffusion of heat throughout the house is desirable Fig. 2 will be found to have many advantages.



Fig. 3. represents the arrangement which Mr. Penn has adopted for the heating of his pine stove. The hot water pipes are placed at the back of the house, and the heated air ascends immediately to the highest part of the roof, and when it has become a good deal cooled descends by the front at q.

passes under the tan bed by u, and again passes through the pipes at p; o, wood boxes placed along the back part of the stove, by which the heated air is conducted to the top of the house at once; these boxes are placed at about four or five feet from each other.



Fig. 4. represents the same house, with the hot water pipes placed in front of the house instead of the back as in Fig. 3. It will be understood by the direction of the arrows that the heated air ascends from the front *i*. and passes upwards close under the roof, and gradually, as the air is cooled it descends by the back

path h. and under the bed u. and k. till it come in contact with pipes again at i.

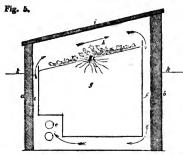


Fig. 5. represents a section of what would be an exceedingly useful pit, either for the growth of cucumbers, melons, or for the growth of flowering plants. The pipes c. being in the front, the heat would pass upwards by eand over the plants h. and again return by the back at f. q. is the bed in

which the manure or earth is placed k. k. shows the ground line, and a. b. the back and front walls, which might be hollow, if required. The little drains passing under the bed, by which the air circulates, may be about nine inches square, and at a distance of four, five, or more feet from each other.

In conclusion, we beg to observe that the preceding remarks have been made with freedom, they do not detract in the slightest degree from the merit of Mr. Penn's most valuable discovery. If we understand Mr. Penn, it is not how or where the hot water pipes are placed, in the house, nor whether the air is made to circulate from the back of the house to the front, or from the front to the back; indeed, this is a question that the practical gardener will soon settle. The great merit of Mr. Penn's discovery is, that it can be made to circulate, not in one, but in an almost endless variety of ways.

It is evident from the examples shown us at Mr. Penn's own residence, at Lewisham, that his mode of applying the heat by having the pipes in the centre of his orchideous house, and in the back of his pine stove, that it answers well, the plants thrive and look remarkably healthy. We are, nevertheless, convinced that it is important that the heat should be generated in the front, or near the side walls of the house.

At least, a pretty extensive experience in matters of this kind, of nearly twenty years' standing, prevents us coming to any other conclusion.

We have been kindly supplied with the following testimony in favour of Mr. Penn's mode of heating, and we have no doubt but those who propose introducing it, would find it to be ultimately the cheapest to employ Mr. Penn to erect it.

"I this morning received your letter, requesting my opinion of Mr. Penn's system of circulating the air in hot houses, and beg to assure you that it has my unqualified approbation, being, in my opinion, vastly superior to any thing previously known. The unceasing agitation in which the plants are held, seems

to produce a most favourable effect, imparting a health and vigour unatainable under other circumstances. It has now been some time employed in two establishments under my immediate inspection, fully answering every expectation. Of course, I cannot speak of the results it may produce after a sufficiently lengthened trial; but so confident am I of its superiority, that I have made its adoption in several houses that I have designed since its introduction an express condition, and should strongly recommend it in preference to all others."

Folkston, 7th November, 1840.

AMES MICKLE

ON THE FORMATION OF VINE BORDERS, GENERAL CULTURE AND THE CAUSES OF SHRIVELLING.

BY T. MOORE.

The cultivation of the vine, in structures erected for that purpose, is not only an object of emulation amongst gardeners, but also forms one of the most essential acquirements in their profession. That the growth of the vine, under these circumstances, should be an object of such high interest, is not at all surprising, if we reflect how very few situations our island affords, where this luscious and delightful fruit can be brought to perfection in the open air. The following remarks are not, however, intended to detail any system of forcing the vine; but merely to point to certain radical defects in their culture, which are everywhere more or less apparent.

The result of the defective treatment referred to is apparent in that state of the berries, in which they do not attain their proper colour, and also, shrivel before they become fully ripened. The causes which produce this resulting evil may be various; the situation may be unfavourable; the season unpropitious; the internal climate and temperature, either the extreme of heat or cold, or superabounding with moisture; the roots too deeply immured in the soil, beyond the beneficial influence of heat and air; the border itself cold, and ineffectually drained. These, and other causes, may, under different circumstances, tend to produce the evil in question; but I hold as an opinion, that the two last-named causes are its most fruitful sources: when the roots of a plant are embedded in a mass of rich earth, at a distance from the surface, a rank and luxuriant growth may result; the roots find abundance of aliment, and the supply of sap becomes greater than the powers of the plant can elaborate; the consequence of this superabundance of crude and acid juice, is, that a stagnation takes place throughout the whole plant; the leaves cannot perform their office and return food to the roots; the summer's growth of young wood remains unripened; the fruit, if any, ceases to advance towards maturity; it fails in attaining its proper

colour, and it shrivels and decays. Contrast with this the state of a plant, the roots of which are planted in a shallow, well-drained border, of pure virgin soil; in this case, the growth is moderate, in consequence of the supply of sap being no more than convenient; the course of nature provides means for its elaboration, and the deposit of abundance of saccharine matter becomes evident, in the perfect ripening and high flavour of the fruit, and also in maturing the wood and buds for another season.

Assuming that I have assigned the defects in question to their proper source, I will endeavour to point out a remedy: instead, therefore, of providing deep and elaborately prepared borders of rich soil, and burying the roots beyond the influence of the sun and air, let them be laid out horizontally, a few inches below the surface, in a shallow border of the soil, hereafter to be recommended. The absurdity of providing deep borders is exemplified by the fact, that in those parts of France, where the vine is cultivated in the greatest perfection, the soil is remarkably thin, and the subsoil rocky. The vineyards of Anjou are planted in a thin stratum of soil, among schistous rock; and those of the Rhine, renowned for the excellence of their produce, are all growing upon rocky foundations, but sparingly covered with soil.

In the preparation of a vine border, two considerations, of primary importance, present themselves; which are, whether the natural soil and subsoil be wet, cold, and unfavourable to vines, or the reverse. I will proceed on the former supposition: in this case, let the original soil be removed to the depth of 1 foot, and from 15 to 20 feet in width, making the bottom quite even, and sloping outwards, forming an inclined plane, of at least 1 inch in 2 feet; then dig out a drain exactly underneath where each vine is to be planted: this drain should be dug out 18 inches deep, and the same in width, across the border; at the extremity of which, a main drain, 3 feet deep, should meet these at right angles. The drains are to be filled up with loose stones, laid as hollow as possible; over these, and the whole bottom of the border, place 9 inches of brick-bats, and on this 3 inches of coarse lime rubbish, or old mortar. The soil forming the border will then be elevated above the surrounding ground, which will be found to be productive of the best results, on the growth and constitution of the vines. The border may be composed of something like the following ingredients: - Good mellow loam, and the turfy parings from the edges of public highways, in nearly equal proportions, adding a small quantity of well-decomposed manure, and of old mortar or lime These several ingredients should be well blended together, by frequently turning and mixing them during the summer previous to their being used.

I have before remarked, that in France, where the vine is cultivated with great success, the soil is remarkably shallow; this ought not to be overlooked, in preparing an artificial border for their growth: a depth of about 2 feet is abundantly sufficient; and this ought, as I have recommended, to be elevated above the general level of the ground; the influence of the atmosphere on the soil is of the utmost importance, in preventing the absorption of improper food, in promoting the maturation of the sap, as well as its elaboration, by exercising that influence over the healthiness and well-being of the plants.

Another very important point in planting vines, or indeed any other tree, is, that the roots be encouraged to extend themselves horizontally near the surface, for in this situation it is that they imbibe the healthiest aliment, in consequence of their proximity to light and atmospheric influences, which are so important to vegetable development. Walks should never be allowed to cross vine borders, neither ought they to be trodden on, upon any consideration, as this would have an effect directly contrary to that of encouraging surface roots.

Connected with our subject are the following rational observations. by Mr. Rogers, an excellent pomological author: - The vine, like all other fruit trees, grows most luxuriously in rich, deep soils. In that it has large shoots, leaves, and perhaps a few large bunches; but the shoots and fruit ripen later, and the latter, if they ripen at all, will be very insipid. In opposite circumstances, these results are reversed. In a shallow, light soil, the growth is moderate; the shoots are small, though not weak; the bunches numerous, well ripened, and of high flavour. The young wood is also thoroughly hardened, having prominent buds, which break with vigour, and high health in the following year. It is also well known that the roots of the vine, in order to have healthy, moderately-sized shoots, and high-flavoured fruit, require an extensive horizontal range, deriving, it seems, much benefit from the influence of the air, and the heat of the sun, when near the surface. If these opinions are well founded, it is a matter of wonder to see what some authors have advised respecting the formation of vine borders. Vast accumulations of the richest soils and manures are mixed together, as if for the gross feeding drum-head cabbage, rather than for the delicate feeding and abstemious grape vine, which, in its native habitation, is content to climb upon, and subsist, by what it can draw from the interstices of the naked rock."

In conclusion, I would observe, that in all cases where vines are planted as above directed, it is necessary to afford the roots some protection, before and during the time that forcing is going on, by means of long dung spread over the border, of a thickness sufficient to produce the desired effect.

ON BRUGMANSIA AUREA.

BY THOMAS PARKINS.

I do not recollect to have seen any notice of Brugmansia aurea, in the Floricultural Magazine. It is so well worth the attention of all who possess a greenhouse, that I think it cannot be too strongly recommended; and when treated in the manner I am about to explain, will, I am sure, make its already sensible attractions doubly interesting. In the summer of 1837, I had planted, in the border of the Conservatory at Cannon Hall, a plant of Brugmansia arborea. which, in the course of the summer, attained the height of six feet of clear stem: this plant, after having done flowering, and cast its foliage, was taken up, repotted, and placed in a cool and dry vinery for the winter. In the spring of 1838, about the middle of March, it was turned out of the pot, the old soil cleared from the roots, and repotted in good turfy loam and dung. It was now taken to the pine stove, where a good heat was maintained, in which it soon made fresh growth from the top of the plant, emitting several shoots near each other, two only of which were retained. While this was going on, I was on the look-out for, and was fortunate enough to obtain from a neighbouring and much-esteemed friend, a small plant of Brugmansia aurea, which had been excited about the same time as the plant above alluded to. As soon as the stronger shoot of arborea had grown about six inches, the small plant of aurea was inarched upon it, where it very soon united, as became apparent from its increased vigour of growth. When all was considered safe, the inarched plant was detached, the bandages removed, the other shoot was also displaced, and aurea, having the full supply of sap from a vigorous and more robust growing plant, soon made a fine head, and in the autumn, when in bloom, exhibited more conspicuously from its elevated position, its beautiful golden trumpet-like flowers.

I have practised the same thing here, with this difference, viz., instead of a plant six feet high, I was under the necessity of using one six inches; but the increased luxuriance of the plant proves that the practice is worth attention. There are several other plants, which may be equally improved by grafting, a notice of which, if acceptable, may form the subject of a future communication.

Capesthorne, Congleton, Cheshire.

[The notice would be very acceptable.-ED]

FUCHSIA CORYMBIFLORA.

BY JOHN STANDISH.

The best way to grow and flower this plant is to prepare a border or bed in the flower garden with light rich soil, and in the month of May, when all appearance of frost is over, turn the plant out in the place so prepared, when, from the easy excitement to growth, it will soon make an handsome plant, and form a massive ball of roots. When showing flower (if desirable) the plant can be taken up and potted, and placed in a close place for a few days; after which it can be taken to the greenhouse or conservatory without scarcely feeling its removal. This plant can also be planted at once in the conservatory border, but care must be taken to have a well prepared place for it, being a very strong feeder, it cannot have too much room; depth, or richness of soil, and the more vigour the plant is grown with, and the larger will be the racemes of flowers, and more numerous the side ones.

To have small flowering plants, take cuttings when in a flowering state, put them in thumb pots, and place them under a bell glass, which strike root readily, and by shifting them in larger sized pots, they will perfect fine racemes of flowers.

Nursery Bagshot.

[Our correspondent is the raiser of this beautiful plant, which is well deserving the attention of all lovers of showy and really beautiful plants.—ED.]

ON THE CULTIVATION OF THE TULIP.

BY EDWARD LEATHAM.

Planting.—The bulbs should be planted in beds in the month of November. The brown skin over the crown, just before planting, should be peeled off. Care ought to be taken not to bruise in any way the bulb, for this will produce canker, and perhaps may destroy the whole bulb. An open and airy aspect ought to be chosen, that in the earlier stages they may have the full benefit of the sun, but they ought to be protected from the north and east winds. I plant mine about six or eight inches apart in both length and breadth, that they may have plenty of room; but I believe some florists plant them much nearer. The soil that suits them best is a rich turfy loam, mixed with well rotted frame manure, and a little sharp sand. The bed ought to be made in a raised form, so that the middle is higher than the sides, by which means the water may run off. The bed may be marked out by straining a line across it, down which a

stick ought to be passed, in which a notch should previously be cut, so as to fit the line, which leaves a mark. Then with a dibble mark along the line, at about six or eight inches apart, holes of about four inches in depth, in which put a little sand, then insert the root, and cover it over with sand. The bed should then be raked over, and the process of planting is finished.

Protection.—When the planting is finished, the bed ought to be hooped over, which ought to be covered with canvas, or mat, in the case of heavy rain or severe frost; but be careful not to keep it on too long, as slight frost or gentle rain will do good rather than harm to the roots. As soon as the leaves appear, care ought to be taken to prevent canker and destroy insects. Waterings may be given with advantage in the months of March and April, if the surface appear caked. As soon as the buds begin to show colour, an awning ought to be placed, so as to keep the rays of the sun off, for the sun takes away or very much fades the colour; the flowers also live much longer when protected from the sun. The tall plants should also be supported by sticks, for the stems are very apt to snap at this period of their growth.

(To be Continued.)

ON THE MAGGOT IN ONIONS.

BY A GARDENER.

Having had my onions very much destroyed by the maggot for several years, I was very desirous to find out from what insect they were produced, and also a remedy to prevent their future destruction. I first took a quanity of the maggots and placed them in a situation that I thought was the most likely to bring them to maturity. I soon perceived that they were produced from the eggs of the common black fly, the same kind that so much frequent the dwelling houses; I found that they deposited their eggs betwixt the leaves of the young onions, and that they soon acquired the maggot form, and quickly afterwards descended into the stem and young bulbs, which shortly afterwards exhibited the well known sickly appearance. The best remedy that I have found out for preventing the fly from depositing their eggs on the young onions is, to take a quantity of soap suds from the wash-house, and to every three gallons add one pint of very old tobacco water, then in the evening, take a watering pan with a fine rose and sprinkle the tops of the plants well over two nights in the week, from the middle of the month of May till the beginning of July, if there should be any appearances of the fly, if not, it is not necessary to continue so long. By attending closely to this method the last season (1840), I had a most abundant crop of large onions

upon the same ground, where they had for several years past been completely destroyed by the magget. Should you think this worthy of your notice, perhaps it may be of service to some of the readers of your valuable Magazine.

[We know our Correspondent to be a most excellent Practical Gardener, having recently left his last situation, and would now be glad to engage with another. The test by which the result in question has been arrived at, as we understand, is only the experience of one year. If our Correspondent has practised it more than one year, we should be glad to hear from him to that effect; at any rate, it is a most excellent answer to a Constant Reader in the present Number, and is besides, a really valuable hint to gardeners generally. The grub (as it is called), in the onion, is a vexatious pest felt by almost every gardener, and we are not aware that it has been effectually subdued by any.—ED.]

ON THE CULTIVATION OF THE GENUS CINERARIA.

BY B. H. H.

Agreeable to promise, I herewith send you my mode of growing Cinerarias, which is allowed to be attended with considerable success.

Perhaps there is no tribe of plants more easy of cultivation than the genus Cineraria, but nowithstanding this, I am sorry to add I have often seen hundreds of them grown, not one of which could be called a fair specimen; but it is evidently with Cinerarias as with many other fine flowering plants, instead of one fine specimen, we may see, perhaps, a dozen meagre plants, not one of them worthy a place in any collection. My mode of cultivation is as follows: In the latter part of May I take cuttings from those I cannot procure offsets from, potting them in a mixture of sandy peat and loam, placing them in a gentle bottom heat, and shading them from the sun when necessary. As soon as rooted, they are potted off, the largest into large sixties, and the weaker into small sixties, again placing them in a little bottom heat, until fairly established, when they are placed in a cold frame, and finally brought to the open air, but this must be done by degrees. They are repotted as often as the pots are filled with roots; the compost for the last shifting, is equal parts of fresh maiden loam and heath mould, with one-third of rotten manure. They are supplied with manure water from cow and sheep dung once a week, which is of infinite value to them. In the first week in September, they are placed in cold frames, as near to the glass as possible without coming in contact with it, always leaving the lights off every favourable opportunity, as long as the weather will permit, until their final removal to the greenhouse; and the proper time for this operation is as soon as the flower begins to expand. The flowering stems are then neatly and regularly tied up to small

stakes as they make their growth; in the greenhouse they form most splendid objects during the dull winter and early spring months. I am most careful to admit a free circulation of air all round them at all times, and never allow them, at any time during their growth, to come in contact with any other plant, or to touch each other. Keeping them free from the aphides is of the greatest importance, and must be attended to as often as necessary by fumigation with tobacco. The offsets are treated exactly as the cuttings, except being potted at first into pots according to the state of their root; the size of the pots that we flower them in are from twenty-fours to sixteens. If the foregoing remarks are attended to, the result will be most magnificent plants with fine luxuriant and highly beautiful foliage, with a mass of the most splendid bloom, not surpassed by any flowering plant at this dull season of the year; and by taking cuttings or offsets every month till September, the flowering season may be prolonged for a considerable time.

The above remarks are from one devotedly attached to this most beautiful class of plants, but I make no doubt they will appear tedious to many; to such I would observe, grow half a dozen plants in the way here recommended, then, and not till then, can the above directions be duly appreciated.

Growing a few more genera with equal care and success, should you desire any remarks on those we are acquainted with, they are at your service.

[We shall be glad to receive the remarks alluded to.-ED.]

REFERENCE TO PLATE LVIII.

LOBELIA UNIDENTATA. Single-toothed Lobelia.

NAT. ORD. CAMPANULACEÆ. CLASS PENTANDRIA MONOGYNIA.

This is one of those beautiful little plants so admirably adapted for decoration in the flower garden, especially of basket work, being of a slender trailing habit; and, therefore, peculiarly adapted as a graceful trailing plant for rock work, rustic basket, &c. &c. It bloomed in Mr. Low's nursery during last summer.

DIANTHUS GAULTHAESI.

NAT. ORD. SILENACEÆ. CLASS POLYANDRIA DIGYNIA.

This pretty variety of double pink has bloomed in Mr. Low's nursery, and was obtained thence from the Continent, but anything further relating to its history we have been unable to obtain; it appears to be a very strong growing plant, producing flowers of very large dimensions, and will, we have no doubt, prove an acquisition to the flower garden during the summer months. Any thing new in this beautiful family cannot fail to be approved, nor yet to please. It is also one of those plants that appear to be of easy culture, and is there-

Lobelia unidentata.



Indows and

Dianthus Gantthasii .

J R Just

io visti Sautsilai fore the more likely to become a popular one. We think it is probably hardy, but at any rate a cold frame will be an ample protection for it during winter; if even this should be needed, but which, from its appearance, we do not expect.

NOTICES OF NEW PLANTS.

GERANIUM RUBIFOLIUM. Bramble-leaved Geranium.

Bot. Reg.

NAT. ORD. GERANIACER. CLASS DECANDRIA PENTAGYNIA.

A neat hardy perennial, raised in the Garden of the Horticultural Society from Himalayan seeds. It is of erect habit, with large purple flowers, which it produces in July and August. It should be planted in light soil in a dry situation, as it is soon destroyed by wet in winter. It is easily increased by division of the roots, or by seed.

ANGRÆCUM GLADIIFOLIUM. Sword-leaved Angrec.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ VANDEÆ. CLASS GYNANDRIA MONANDRIA.

A native of the Mauritius, and a plant of little beauty.

FUCHSIA CORYMBIFLORA. Cluster-flowered Fuchsia.

[Bot. Reg.

NAT. ORD. ONAGRACEÆ. CLASS OCTANDRIA MONOGYNIA.

This beautiful plant has been introduced by Mr. Standish, of Bagshot. It is by far the most beautiful species that has yet been added to the many of this fine family, already so common in our gardens. It is of easy cultivation, striking readily from cuttings, and growing freely in a mixture of loam, peat, and sand. Although it is pretty if grown in a pot, its fine corymbs of deep scarlet blossoms will be produced in greater perfection, if it is placed on the borders of a conservatory. It will undoubtedly, when more common, be used as an ornament in our flower beds, and will be found more hardy than F. fulgens. Dr. Lindley gives the following remarks upon the genus. "In the flora Peruviana, the present species is spoken of as acquiring the height of a man, with a stem but little inclined to branch. It was found in the woods of Chinchao and Muna, places to the north-east of Lima, in shady situations. It is in this part of the world that the race of Fuchsias attains its greatest beauty, and developes those colours and forms which have gained for it among the Peruvians the name of Beauty Bush (Mollo Scantu). Besides the subject of the present notice, several others of even finer appearance, are mentioned by the author of the Flora Peruviana, and remain amongst the greatest desiderata of Horticulture. F. serratifolia is a bush with pink flowers an inch and a half long, growing in the manner of F. macrostumma and its varieties F. denticulata is described as 12 feet high, gorgeously beautiful when loaded with its purple flowers, still larger than those of F. corvmbiflora, while F. simplicicaulis and apitala, are similar in appearance, but yet more striking."

PUYA HETEROPHYLLA. Various leaved Puya.

Bot. Reg.

NAT, ORD. BROMELIACEÆ. CLASS HEXANDRIA MONOGYNIA.

A very pretty plant from Mexico, with long bright green flexible lanceolate caves, and remarkably sharp and brittle spiny processes. The flowers are pro-

duced in a close oblong spike, composed of imbriated woolly cartilaginous pale green bracts, they are light pink, and rather pretty. It appears to flourish in a very light substance, such as sphagaum, and abundance of moisture, with a moderate temperature when in a growing state, but when the leaves begin to turn yellow, it must be kept dry and cool till it shows flower.

DENDROBIUM MOSCHATUM. Musk smelling Dendrobium. [Bot. Reg. NAT. ORD. ORCHIDACE E. CLASS GYNANDRIA MONANDRIA.

A noble plant, with a flowering stem from five to six feet high, which produces racemes from its sides eight or ten inches long, with six or eight flowers on each. The flowers are large, the colour tawny, suffused with rose colour, exhaling a faint smell, about the exact similitude of which there appears to be some difference of opinion, but that diffused by the plant from which the figures were taken, is likened to that of the sweet-scented Woodruff (Asperula odorata).

DEUTZIA SCABRA. Rough-leaved Deutzia.

Bot. Mag.

NAT. ORD. PHILADELPHIACE &. CLASS DECANDRIA TRIGYNIA.

A hardy shrub, with the habit of Philadelphus. It grows from four to eight feet high, with slender branches and rough ovate leaves. The flowers are moderately large, white, and are produced in racemes. It is easily propagated by layers, is a native of Japan, and has been known for some years.

MONOLOPIA MAJOR. Larger Monolopia.

[Bot. Mag.

NAT. ORD. COMPOSITEÆ. TENEROIDEÆ. CLASS SYNGENESIA SUPERFLUA.

A Californian annual, introduced by Mr. Douglas, and known in our gardens under the name of Helenium Douglasii. It grows from two to three feet high, with dark green foliage, and large yellow flowers with a deep orange disc.

SIDA PICTA. Painted-flowered Sida.

Bot. Mag.

NAT. ORD. MALVACEÆ. CLASS MONADELPHIA POLYANDRIA.

This has hitherto been treated as a greenhouse plant; but it will, in all probability, succeed in the open air in a well sheltered situation. It is a shrub growing about two feet high, with shining ovate leaves and gaily painted flowers, which it produces almost all the year, and is well worth a place in every collection, being of easy cultivation and as easily propagated. It is a native of Buenos Ayres-

GRABOWSKIA DUPLICATA. Toothed Grabowskia.

Bot. Mag.

NAT. ORD. SOLANACEÆ. CLASS PENTANDRIA MONOGYNIA.

A rambling shrubby plant, with broad ovate leaves and small greenish white flowers. It is a native of South Brazil, and requires a moderate stove heat; but it is a plant of little beauty.

ISOMERIS ARBOREA. Tree-like Isomeris.

Bot. Mag.

NAT. ORD. CAPPARIDEE. CLASS HEXANDRIA MONOGYNIA.

An erect shrub, with heavy branches, alternate trifoliate leaves and yellow flowers, which emit a slight but offensive scent. It is a native of California, but it does not appear to be decided whether it will best succeed in the greenhouse or stove. It has been kept in the former at the Royal Botanic Gardens, Edinburgh, but it did not flower; while in the Gardens of the Caledonian Horticultural Society was placed in the stove, and it flowered in the beginning of May.

ONCIDIUM LEUCOCHILUM. White-lipped Oncidium. [Paxton's Mag.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

One of the most beautiful of this extensive family, producing a flower-scape nine feet long, with lateral branches, varying from eighteen inches to four feet long each. Mr. Paxton observes—" Suspended from the roof of the stove, the immense length of the stem and the gracefully flowing form of the branches, beautifully bedecked with their finely variegated flowers, create a picture at once impressive and fascinating to the most indifferent examiner." It is recommended (instead of potting it in the soil which is generally used for the other species) to fill the pot nearly to the brim with drainage, and then with moss, upon which the plant is fixed. This, with plenty of moisture when in a growing state, appears to be most suitable for the fine thread-like roots of this species.

ERICA BANKSIANA. Banks's Heath.

[Paxton's Mag.

NAT. ORD. ERICACEÆ- CLASS OCTANDRIA MONOGYNIA.

The dwarf bushy habit, the shortness, denseness, and pendency of its branches, the intense verdure of its foliage, its elegant flowers, with their double tints, render this one of the most desirable, as well as one of the most ornamental of the spring flowering Heaths.

ROELLÆ CILIATA. Ciliated-leaved Roella.

Paxton's Mag.

NAT. ORD. CAMPANULACEÆ. CLASS PENTANDRIA MONOGYNIA.

A plant which has long been known, but has been neglected and despised, by reason of so little attention having been paid to its cultivation. When properly treated, it becomes a handsome evergreen shrub, growing from one to two feet high, and producing abundance of large-shaped flowers, whitish at the bottom, with a deep purple band round the centre, which merges into a pale violet or pinkish purple. It will be found a very great ornament to our greenhouses in October, November, and December. The treatment which will be found most suitable for this plant will be very light soil, such as two-thirds sandy heath soil to one of light loam, with a considerable quantity of sand. Care must be taken to have the pots thoroughly drained, putting a small quantity of moss betwixt the drainage and the soil. In applying water, it is necessary to be attentive that it passes freely through the pot; and to effect this, the surface should be kept free from moss and the outlet free from coagulated soil. The plant should be kept in an airy situation, and pruning may be occasionally found necessary to induce it to produce lateral shoots. It may be propagated by cuttings in sand, with a little heat.

RIGIDELLA FLAMMEA, Flame coloured Stiff Stalk.

Pax. Mag.

NAT. ORD. IRIDACE ... CLASS MONADELPHIA TRIANDRIA.

A remarkably handsome and showy plant, with leaves somewhat like Tigridia pavonia, and with elegant drooping flame-coloured flowers, with a campanulate tube and reflexed limb. It will succeed well in a mixture of loam, peat, and sand; the roots should be taken up and dried when the leaves decay in autumn, and, if grown in pots, unpotted in November. There is little doubt but when it is better known it will be found equally hardy, and not require more care than Tigridia pavonia.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

PHOLIDOTA CONCHOIDEA.

A curious plant found in the Manilla, which has lately blossomed at Knypersley. It is very like P. imbriata, but the flowers are nearly twice as large, and the keels of the lateral sepals are so deep and concave, as to give the lower side of the flower the appearance of the inside of a bivalve shell.

GROBYA GALEATA.

A Brazilian orchidaceous plant, in habit like Grobya Amhertiæ, but the flowers are dull green, stained a little with purple, and the lip is indistinctly banded with the same colour.

CONVOLVULUS FLORIDUS.

Is a shrub with long grey willow-like leaves and terminal panicles of small cream coloured flowers.

PIONAYA ELEGANS.

A twining evergreen shrub from Swan River, with narrow greyish green leaves and terminal clusters of pale lilac flowers. It is nearly allied to Sallya, but inferior to it in beauty.

IPOMEA PENDULA.

A pretty plant from Norfolk Island. It is rather woody, with many prickles on the stem, and long purple flowers about two inches long. It flowers freely in summer in a pot out of doors.

THOMASA CANESCENS.

This is a pretty little greenhouse shrub from New Holland. It has small cordate three-lobed leaves, covered on the under side with whitish hairs; the blossoms are bright purple.

IMPATIENS CANDIDA.

A noble looking tender annual from India, growing six feet high, and bearing large terminal clusters of snow-white flowers, spotted with crimson.

SALVIA REGLA.

A beautiful half hardy herbaceous plant, with a shrubby stem, uneven light green leaves and long bright scarlet flowers.

MARTYNIA FRAGRANS.

This is a half-hardy annual of great beauty, with large purple flowers enlivened by a bright yellow streak along the middle of the lower lip, and is deliciously fragrant. It has produced its flowers in our nursery at Hackney. We shall shortly give further information about this plant.

SALVIA PRUNELLOIDES.

A dwarf tuberous rooted perennial from Mexico, with blue flowers. It will be an acquisition to the flower garden for bedding out in the summer, and will form a good contrast with Verbena Melindris, &c.

POLYSTACHYA CERIA.

A small species of no particular beauty.

ERIA VELUTINA.

A singular plant of no beauty from Sincapore. It has pale dirty yellow flowers, growing singly among hairy bracts opposite the leaves.

PUYA ALTENSTENII.

A splendid stove plant with the habit of Tillanasia, the leaves are long green, and unarmed; it produces oval heads of rich scarlet bracts, from among which protrudes long snow-white flowers.

LOBELIA DISCOLOR.

A greenhouse herbaceous plant with deeply lobed heart shaped leaves, spreading flat upon the ground, and erect panicles of small blue flowers.

OLINIA CAPENSIS.

A Cape shrub of the Myrtaceous order, flowering from April to the end of June, and ripening its fruit the second year, so that the bush has at the same time flowers green fruit and ripe red fruit.

OXALIS ALTONIS.

A Chilian species, with bright yellow flowers and leaflets so deeply divided, that each stalk seems as if it bore six leaflets instead of three.

MICROSTYLIS HISTIONANTHA.

A stove plant of no particular beauty.

PERISTYLUS GOODYERIOIDES.

A herbaceous species of the orchidaceous order, inhabiting the north of India. It produces a long spike of pure white flowers, about the size of the Lily of the Valley, the fragrance of which it rivals.

SPIREA ROTUNDIFOLIUM.

This is a native of Cashmere, the seeds were presented by the Directors of the East India Company, and raised by the Horticultural Society. This plant has not yet bloomed, but it evidently belongs to the section of the genus, S. vaccinifolia. I cannot find this plant described any where, and it is unquestionably new to our gardens.

ONCIDIUM PELICANUM.

Closely allied to O. reflexum, from which it chiefly differs in the sepals and petals being less blotched, and in the lateral lobes of the lip being smaller in proportion than the intermediate segment.

BALBOPHYLLUM SORDIDUM.

A native of Guatemala, with very fleshy flowers, of a dull olive brown externally, and brightly mottled with purple in the inside.

RODRIGUEZIA MACULATA.

A plant with small flowers, faintly spotted with purple; it has no particular beauty.

DENDROBIUM CALCARATUM.

A slender inconspicuous species.

ERIA CLAVICAULIS.

A very pretty Indian epiphyte. The flower is white, the lip downy along the middle and all over the centre lobe, and is bordered with pink round the lateral segments.

IPOMŒA FICIFOLIA.

A beautiful stove climber, with rich purple flowers, and an unusually short tube.

REVIEWS.

Cemetery Interment, by GEORGE COLLISON, Esq., Solicitor, and Secretary to the Abney Park Cemetery.

The Author has rendered his work a most interesting one; and grave as the subject might at first appear, it contains much that will both amuse and instruct the reader. In the Abney Park Cemetery, an extensive collection of trees and shrubs have been planted by the Messrs. Loddiges. They are arranged scientifically, and in number amount to 2,000 species and varieties.

The historical associations connected with these beautiful grounds are also of more than ordinary interest. It is supposed that Cromwell the Protector, was buried here; and the mound and a circle of trees' partly in existence, are said to indicate the sacred spot; and although this circle of trees was necessarily removed in the formation of the cemetery, the one on the summit has evidently been regarded as a tree of more than ordinary interest, from the circumstance, vulgar and inexcusable as it is, of the initials of numerous visitors being cut on the bark. The form of this mound has been preserved; and a stone slab, with a copy of the epitaph inscribed on Dr. Watts's Tomb, in Bunhill Fields, is placed upon it.

Abney Park is consecrated, in the best and purest sense of the term, to the minds and feelings of all intelligent Christians, by its having been the favoured residence of that gifted man Dr. Watts, for in the turret of the venerable mansion that adorns the ground, many of his works, literary and religious, were composed. Some of the ancient trees, which throw their broad stems over the tombs of the departed, were planted by his hands: and here also, he closed his eyes in peace.

The cemetery has been opened during the present month (May 1840). The mode in which the planting department has been conducted, deserves the attention of the visitor. The Directors confided it to Messrs. Loddiges, of Hackney, who have formed a complete arboretum of plants, in which specimens will be found of all trees and shrubs which are sufficiently hardy to bear the out door climate of this country.

A small portion of the estate, consisting of three or four acres, has been set apart for the reception of roses only; and in this roserium are planted upwards of a thousand specimens. The arboretum, containing about 2,000 varieties of trees and shrubs, including a choice collection of pines, is also completed, with the exception of the magnolia and rhododendron tribes, which, with other American flowering shrubs, will not be planted until the autumn.

This cemetery is open to all respectable applicants, and, in the course of a few years, the arboretum will be an interesting and valuable object in the neighbourhood.

MISCELLANIES.

"The skilled gardener rises in his position and means, as horticultural science multiplies its inventions. The gardener, who was once a mere labourer, becomes the director of labourers: the work of his hands diminishes, and that of his brain increases, and brings him a better remuneration; he is advanced above his fellowlabourer, whose bones and sinews have to compete with the spade, the mattock, and the wheelbarrow. The unskilled gardener has to stand the brunt of ceaseless improvements and changes, which press him downwards; while they heave others upwards. It may still be the fact, that the condition of the labouring gardener is much above that of his forefather; but, then, how changed is the whole state of society! If absolutely better, he is comparatively worse; and, moreover, if he be not educated in the mode that would most benefit him, there is a kind of education continually going on, which is not lost upon him. There ought not to exist in this country a numerous race of unskilled gardeners or labourers, of any description; so long as it does exist, we are treading upon gunpowder. The permanent safety of society, through all its ranks, and in all its institutions, is contingent upon the instruction of the poorer classes. Every one should be put in training, to become a skilled, instead of an unskilled labourer, by which alone he can be put in the way to avail himself of that common heritage of improvement from which he is now excluded."-Loudon's Gardeners' Magazine.

"Various opinions are abroad respecting the best mode of forming forests of oak; some maintaining that it is indispensably necessary, in order to preserve the native vigour of the tree, that plantations, if possible, should be sown; whilst others recommend the ordinary practice of planting. We are aware, from experience, that frequent transplantation has a tendency to subdue and soften that rigidity of fibre which all young trees possess; in the case of the crab tree, it lessens the sharpness and sourness of the fruit; and it is well known, that in Spain and Portugal, where large plantations of the chestnut are made, the practice of frequently shifting the trees is resorted to, for the purpose both of checking their growth and freeing the nuts from that woody taste which they otherwise have. It ameliorates and subdues the wildness of their native character; and it must have a corresponding effect on the texture of their timber. But notwithstanding all this, our conviction is, that if a tree is transplanted finally before it loses the nower of forming to itself a new taproot, as it is called, it is immaterial whether it rise in the forest from seed or plant. An oak, for example, that is planted and replanted often in the nursery, before being placed in its final destination, has a bushy, matted root, and has no such power; it will never shoot up vigorously; the top, in sympathy with the root, will break into numerous branches, and form a roundheaded tree. Great care must, therefore, be taken to give every encouragement, by pruning, to the principal shoot, in order that it may have always a decided ascendancy over the others."-The Eastern Arboretum, &c., by James Gregor.

"In watering the species of Aloe, and all those succulents which have leaves diverging in a half-erect position from a common centre, near the ground, the greatest caution is to be observed in the colder months, and, indeed, during the entire year, with the exception of the hottest and growing season. Being so formed as to permit water to lodge in the axils of their leaves, or in the centre of the plants among the younger and more tender foliage, the fluid supplied should not be poured over the plant, but directly on the soil or on the margin of the pot. In the summer months, as before mentioned, such a precaution may be disregarded, and the specimens will be benefitted by watering over the leaves, as well as by the occasional and sparing use of the syringe. There is still a point connected with the administration of water to all succulents, -and we might very properly add, to every sort of exotic grown in pots, did our dissertation include these,-which is too momentous to pass over silently. We refer to the mode of its application as it respects the employment or rejection of a rose to the watering-pan. In some collections it is customary to adopt a comprehensive system of watering, in order to save labour; and to throw fluid most copiously through a rose over the whole of the plants to be supplied. In the summer too, when a large amount of water is essential, it is furnished in that manner till a pool of it is left standing in each pot. Now, without taking into account the number of specimens that thus receive more water than they need-the mischief caused by which can hardly be over estimated-if watered by the heavy falling of large drops of fluid from the rose of a watering pan in such quick succession as to create a puddle, the subsequent influence of the sun, when it has its ordinary summer power, will literally bake it into a solid incrustation, through the fissures in and around which liquid can alone reach the roots of the plant. That this hardened earth is particularly injurious to succulents, since they have to be supplied very sparingly with water at certain periods, and that water is expected to pass to all their roots, when, in such a condition, it could at the uttermost merely reach the exterior ones, needs not to be more than hinted; and the absolute necessity of supplying water through the spout of a vessel placed close to the soil, or resting on the edge of the pot, will be strikingly obvious."-Puxton, on Succulent Plants, in Magazine of Botany for December.

Poinsettia Pulcherrima.—This very ornamental plant is now in splendid bloom in the garden of his Grace the Duke of Portland, at Welbeck, Nottinghamshire. The bloom, or coloured bractea, is now twenty inches across, and still extending in breadth.

Wood Lice.—The French and German horticulturits have long perceived that the only plan of getting rid of these plagues would be, to devise some means of attracting numbers of them together and then destroying them. Pieces of wet cloth attract them a little; cabbage leaves also are found useful; but an unfailing mode of getting them together in great quantities, is to cut turnips in two, and scoop out the vegetable part. Let these be placed out, and on the third day the wood lice will begin to flock to them. The turnips possess no charm for them the first two days, being probably too fresh; but from the third day to the time when the vegetables begin to rot away, the influx of the insects is certain. A vessel of hot water, or oil, should be prepared, into which the turnips should be shaken, and the best time for so doing is in the evening very late. This plan is tried pretty generally in France, and always with success. In Germany, in place of turnips, cows' hoofs are used. These seem inferior to the turnips, as they give shelter only, and not food and shelter combined.—Glenny's Florist's Annual.

TO EXTRACT THE OIL OF WALNUTS .- When the fruit is gathered, and the nuts are separated from the husks, they should be kept dry, and occasionally moved till they are used. The most proper time for the operation is at the close of the winter, as, at this season, the change by which the mucilage of the fruit is converted into oil, has been completely effected, and by longer delay the kernel grows rancid, and the oil becomes of a vitiated quality. The nut is cracked by striking it on the end with a small mallet, and pains are taken not to bruise the kernel. The slight ligneous partition is detached, and such kernels as are partially spoiled are picked out and thrown aside; the sound kernels, thus cleared from every particle of the shell, should be sent immediately to the mill, as they soon become rancid by exposure to the air. They are crushed by a vertical stone, which turns in a circular trough, and is moved by a horse, or by water The paste is next enclosed in bags of strong linen, and submitted to the press. The oil which flows from this first pressure, without the application of heat, is of the best quality; it is very clear, and is proper for food, but it sensibly retains the taste of the nut, which, in general, is not agreeable to persons unacquainted to it, so that the consumption is limited to the departments where it is made. To be kept sweet for the table, it should be drawn off several times during the first months, carefully corked, and kept in the cellar, as it is more easily effected than any other oil by the action of air and heat. After the first expression, the paste is emptied from the sacks, moistened with warm water, and moderately heated in coppers; it is then replaced in the sacks, and returned to the press. The oil of the second discharge is highly coloured, and very speedily becomes rancid; it is, therefore, employed only in the preparation of colours. The cakes which remain after the expression is finished, is used for fattening swine, sheep, or fowls, or making candles. The principal use of this cil is in the preparation of fine colours; it is prepared for this purpose on account of the complete and rapid manner in which it dries, and of the facility with which it is obtained in a perfectly limpid state, which is done by diffusing it upon water in large shallow Vases .- Loudon's Arboretum Britannicum.

QUERY.—I shall feel obliged by your noticing the following in the Floricultural Magazine. Being an admirer of the succulent tribe of plants, I am desirous of adding a few of the melon-shaped cactear to my collection, which consists of epiphyllums and the genus cereus. I should wish to know where they could be obtained, the names of such as are likely to bloom freely, and the pride.—CHAS. MIDDLETON.

QUERY.—Having heard much of mimulus Wilsonii, can you inform me if it is really good. Would any remarks on that genus be acceptable. The remarks would be very acceptable on the mimulus.

QUERY.—Sir,—I shall feel obliged to be informed, through the medium of your Floricultural Magazine, of the most successful method of preserving onions from the attack of the grub. In 1839, my onions were attacked with small grubs; about the middle of May, just as they were forming the bulb, I found the invadors to commence their ravages at the bottom of the bulb, and work upwards, so that in two or three days I found four or five had generated, and the onion completely rotted; they were nearly all infested at the same time, and the whole crop spoiled. Last season were about to share the same fate, when I commenced watering my beds with liquid manure every other evening for a week or more, according to the dryness of the weather; this I think checked the

grub, but not to completely destroy them, and encouraged the growth of the onion till the size of wallnuts; after they attained that size, they were too strong for them. If you or any reader of your useful periodical could inform me of a more effectual means of destroying these intruders, you would greatly oblige

A CONSTANT READER.

For answer to this Query see page 180.

ERRATA.—No. LV., p. 164.—Twenty-third line from bottom, for Wistaria (or Glyrine) Linenais, read Wistaria (or Glycine) Sinenais.

MONTHLY CALENDAR.

FLOWER GARDEN.—Very little can be done in the flower garden at this season. We may suppose all protecting to have been previously attended to; and if the weather is mild, it is by no means advisable to attempt digging among, or in any way disturbing herbaceous plants. Advantage should be taken of severe frost, to renew or add soil to such flower beds as require it on the lawn, as the turf will not be so much injured by wheeling. For other operations, see Calendar for December.

PLANT STOVE.—Great part of the plants will now be in a dermant state, and every care should be taken to keep them so. Besides this, the principal thing for the consideration of the culturist, at this cold season, is the supply of moisture, both to the roots of the plants and the atmosphere of the house; and to ensure a due proportion will require the greatest attention. For ventilation, temperature, &c., see Calendar for December.

GREENHOUSE.—The directions for December are equally applicable to January.

PARK AND PLANTATIONS .- See Calendar for December.

KITCHEN AND FRUIT GARDEN.—Trenching, turning, and preparing composts; preparing and renewing borders, will now be the principal operations. Advantage should be taken of frosty weather to prosecute with vigour all operations where carting or wheeling is necessary. The root cellar will now require attention. Protect potatoes with plenty of perfectly dry straw, mats, &c.; and be careful to keep all apertures closely stopped. In the fruit room, turn over and pick out all decayed fruit, and keep the room as close as possible.

PINE STOVE .- See Calendar for December.

PEACHHOUSE, PINERY, &c.—Forcing should be conducted with more vigour than last month, and attention paid to have a constantly moist atmosphere. A quantity of dung, in a state of fermentation (where it can be introduced), will be beneficial. Attend to ventilation as directed for December. In the hot bed department, be careful your cucumbers do not get scalded by the stream from the linings; be particularly attentive to covering and ventilation. See Calendar for December. Turn and prepare dung for hot beds and linings; renew linings, &c. In the flower forcing department, roses, Persian lilacs, azaleas, rhododendrons, pinks, primroses, mignonette, hyacinths, narcissus, and all other forcing flowers, should be introduced in succession. Give air at every opportunity, and be attentive to watering. If the green fly makes its appearance, diluted tobacco liquor will destroy them, if applied carefully with the syringe.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LVII.—FEBRUARY, 1841.

ON THE CULTURE AND SELECTION OF SHOWY HARDY HERBACEOUS PLANTS.

BY T. S.

I have been a subscriber to your excellent little work since its commencement, during which time I have recommended it in all my various connections, and I am happy to say, with some effect, having succeeded in adding several subscribers to your list, some of which have commenced flower gardening on a small scale, who previously had no particular fancy for that pleasing exercise while others have expressed their disappointment to me in having bought many plants when in bloom which were ultimately lost from their not knowing the nature of the plant when bought, and not having the means for protecting them in winter. With the view of giving encouragement to one class and assisting the other, I beg to hand you the following list of herbaceous plants, all of which are thoroughly hardy, and will grow and flower beautifully with very little attention, except staking, tying, and attending to the surface of the soil, &c.

speciosa Alyssum Janatise Anchusa italica Anemone thalictroides vitæfolia. Antirhinum caryophylloides bicolor Aquilegia formosa canadensis Aristolochia clematitis Campanula macrantha pyramidalis alba Centrocarpus acutifolius

Aconitum versicolor

Dodecatheon media Escholtzia crocea Francoa sonchifolia

Gaillardia bicolor

Coreopsis lanceolata

Corydalis nobilis

Chelone obliqua

Crucianella stylosa

Desmodium obtusum

Delphinium Barlowii

Dracocephalum altaiense

tenuifolia

azurea

mesoleucum

speciosum

gracilis

Pyrethrum roseum Gaillardia picta Geranium blassovianum inodorum pleno Papaver alpina lutea Geum chiloense Hesperis matronalis pleno bracteata. Prunella Webbiana alba 10.11 elegans Hippocrepis balearica Pulmonaria virginica Iris susiana Pæonia albiflora Humei Lathyrus latifolius Potsii albus Reevesii Linaria dalmatica monspessulana album Whitleji Pentstemon barbatum Linum Lewissii pulchellum monogynum diffusum flavum Liatris Scottiana gentianoides coccinea elegans Potentilla Garnieriana Lychnis chalcedonica pleno

Lysimachia ephemera May Lupinus polyphyllus Tong

albus

rivularis

Marica Sabinii

Phlox Wheelerii

elegans

reflexa

læta.

floridana

omniflora

Donkalaerii

excelsa

Listonii

pyramidalis alba

Mimulus cardinalis

Mayana
Tonguei
chrysantha
Hopwoodiana
Mackayana
Primula farinosa
cortusoides

Harrisonia cortusoides

Cenothera corymbosa Ranunculus gramineus
missouriensis amplexicaulis

Senecio abrotanifolia Spiræa ulmaria pleno trifoliata

Sida malvaflora Stenactis speciosa Thermopsis fabacea Uvularia grandiflora Verbascum phœniceum

Viola erecta Veronica saxatila

The above, with the following bulbs, &c., (Snowdrops, Crocus, of sorts, early and mixed late Tulips, Scillas, Tigridias, Liliums, Hyacinth Fritillarias, Gladiolus, &c., which only require taking up to have two or three months rest after blooming, and planted again in autumn, in any moderate garden soil to insure a splendid bloom, with the exception of tigridia, which should not be planted till spring), will insure a regular bloom from every spring till frost stops them in autumn.

[We are informed by the above Correspondent, that Mr. May, of Hope Nursery, has raised a very handsome new Fuchsia, which he has named "Florabunda magna." Any thing more than this would amount to an Advertisement. We shall feel obliged for the lists alluded to.—ED.]

ON THE CULTIVATION OF THE TULIP.

BY EDWARD A. LEATHAM, WAKEFIELD.

(Continued from page 180.)

Taking up of the Bulbs .- As soon as the petals fall off, care should be taken to remove the seed-pods, if seed is not wanted. The time for taking up the bulbs is come, when the stalk becomes dry enough to bend to the earth a few inches above the ground without breaking. The bulbs should then be dug up and placed in a dry covered place. till August or September, when the loose skin and offsets should be removed, taking care not to destroy the inner skin, which must remain till the time of planting. The manner in which I keep my tulips (and, indeed, most of my other bulbs) is by placing them in trays between one and two inches in depth, and divided into square partitions, a little larger than the largest bulb, to allow room for the admission of the finger and thumb, so as to get the bulbs easily out and in; each partition ought to be numbered, and the numbers should correspond to others written in the list containing the names. The trays, &c. are then placed one upon the other in a box or cupboard, but so as to be secure from mice.

Propagation.—This beautiful plant is propagated in two ways; by offsets, and by seed.

Offsets.—The offsets should be planted shortly after they are taken from the bulb on which they were produced, in a bed by themselves, in the same soil as recommended for full grown bulbs, and treated in the same manner.

Seed.—Procure a box, or pan, in the bottom of which must be several holes, for the surplus water to escape through, after watering. Over these holes place a layer of small pieces of pot or gravel; over which lay thin slates, lapped one over the other, or in the manner of slates on the roof of a house. Then fill the box or pan with fine sandy loam, in which sow the seeds, about half an inch below the surface. For two years the boxes or pans will need no attention, except to destroy all weeds that shall appear, and to keep them from the frost.

In July take the bulbs up, dry them, and in future treat them like full grown bulbs till they flower. The first flowers of seedlings are always selfs; which are held in little or no estimation, and, therefore, it is the business of the florist to break them, as it is called, or to make them show those beautiful streaks of colour so much admired.

Breaking.—This curious and interesting operation is performed by changing the soil, situation, and air in which the bulbs are grown. One year planting them in a rich soil; another year in poor and barren earth. One year placing them in an exposed situation; another in a sheltered one. Planting them one year in your own garden; and the following year sending them to a distance; and growing them in a situation and soil as different as possible from that in which they were planted the preceding year.

Varieties.—Florists generally divide the flowers into four varieties; three of which are subdivided, and are as follows:—

- I. Bizarres, having yellow grounds, marked with scarlet and purple.
 - 1. Flamed Bizarres.
 - 2. Feathered Bizarres,
- II. Byblomens, having white grounds, marked with purple or violet.
 - 1. Flamed Byblæmens.
 - 2. Feathered Byblæmens.
 - III. Roses, having white grounds, marked with cherry or rose.
 - 1. Flamed Roses.
 - 2. Feathered Roses.
- IV. Selfs, having plain colours, either white or yellow; the red or purple Selfs being termed Breeders.

Forcing the Tulip.—The early sorts may be forced in pots or water glasses; the single and double Duc Van Tholl are particularly well adapted for this purpose. When forced in pots, the roots must be planted in narrow deep pots, in sandy loam, and kept in the greenhouse, and they will flower about the same time as the Hyacinths. When forced in water glasses, the water must be changed often, or else it is apt to become fœtid.

Diseases.—The tulip is sometimes attacked by wire-worms and grubs in the spring, and, should such be the case, the roots so affected should be removed, and others brought from the reserve bed to supply their places.

SOME REMARKS ON PROTECTING TENDER SHRUBS, &c. DURING WINTER.

BY AN AMATEUR.

This winter will doubtless prove injurious to many choice shrubs and plants, for although it has not been very severe, yet it has been accompanied by rain and partial thaws, and this, I am of opinion, is more injurious to tender plants than severe dry frost. I have often thought, that of the various means of protection which are afforded to plants at this season, few are calculated to have the desired effect.

It is certain that a slight covering will exclude much cold, so long as it keeps the object to be protected dry, and be placed some distance above it-but how frequently do we see a choice shrub closely matted up, or an herbaceous plant covered with straw at the commencement of winter, and suffered to remain so till all danger of frost is supposed to be over, when they are uncovered, and found to be not only dead but rotten; now, it is evident that this would not have been the case had the covering applied been placed in the case of the shrub, so as not to come immediately in contact with it, and placed a little above the surface of the earth over the herbaceous plant; and if so placed, had the covering been ever so slight but waterproof and opaque, the same plants would in all probability have been found uninjured. would suggest that it be borne in mind in all cases of protecting plants from the injury of frost: first, that whatever means be applied it should be extended a considerable distance round to the roots of the plant, and, if possible, prevented from coming in contact with the branches or shoots of the tree or shrub, more especially at the top. Secondly, that the article applied be perfectly opaque and waterproof. and if at any time there is reason to suspect that the rain or snow has penetrated, it should be immediately removed and fresh covering applied. The covering I would recommend is a frame of wicker work, (made on one, two, or more pieces, so as to be easily put on or off,) and well thatched with fern chips, bark, or, any thing I prefer to straw. I would offer a few more remarks upon this subject, but am fearful of trespassing upon your valuable pages.

LAWNS, THEIR PREPARATION, AND THE KINDS OF GRASSES BEST ADAPTED FOR FORMING A CLOSE TURF.

ву т. Р.

The climate of England is, undoubtedly, favourable to the fine lawns and grass walks of which the country boasts, and with which no other country can compete. There is no natural cause to prevent their attainment in the north of France, Germany, &c., but in the south of France, Italy, and Spain, the hot dry atmosphere of those countries are almost insurmountable obstacles. These may be partially remedied by irrigation, where circumstances will admit of it, or by copious watering in the evening or during the night. Nitrate of soda sown moderately thick in the evening, that it may be dissolved by the dew, or sown during rain, has been found highly beneficial to turf that is suffering from drought in England, and might be equally so elsewhere. However this and any other remedy that may be advisable.

will be rendered comparatively useless, unless proper attention be paid to the preparation of the ground previous to laying with turf or sowing. In most cases, sowing is preferable to turfing, for how frequently in only one square yard of turf do we find ten or twenty species of plants existing, and among them not more than five or six grasses: of these, perhaps, only one or two perennial, and even these not adapted to the soil or situation to which they are about to be removed. If sowing be adopted, a judicious selection of the grasses most suitable to the soil is necessary, choosing such as are of short close growth, and rejecting all the strong growing kinds; but if turf be preferable, it should be carefully chosen from the finest pasture. ground is intended to be laid down as grass, should be thoroughly trenched or deeply dug, and completely cleared of all indiscriminate plants, it should then be brought to the required level and the larger stones and rubbish raked off; the edges of the beds, walks, &c., should then be carefully formed and firmly trod and beat, and then the whole surface well rolled, that it may settle equally; and finally, the edges carefully cut with a sharp spade, it will then be ready for sowing, and the following will be found a suitable selection of grasses for the purpose:-

FOR ONE ACRE OF LIGHT SANDY FOR ONE ACRE OF STRONG LOAMY SOIL.

Agrostis stolonifera	1	Peck
Anthoxanthum odoratum		
Festuca tenuifolia	2	do.
duriuscula	2	do.
ovina	1	do.
Poa pratensis	1	do.
trivialis		
Italian Rye Grass	1	do.
Dutch Clover		

1 Peck
11 do.
l do.
1½ do.
1½ do.
1 do.
1 ½ do.
l do.
1 do.
1 do.
l do.

This will not be more than sufficient for the quantity of ground specified, and if it is obtained from some of the eminent seedsmen who are noted for their selections of grass seeds, the result will be most satisfactory. It should be carefully and evenly sown, and well raked in and rolled, if the weather permit. When the grasses come up, the ground should be carefully gone over and cleared of all weeds and spurious grasses, as they appear; strict attention to this will do much to ensure the future excellence of the lawn. During the first season after sowing, the grass may be mown three or four times, but not in hot dry weather, and afterwards, the oftener it is rolled and mown the better.

ON THE CULTIVATION OF GREENHOUSE PLANTS.

BY S.

Beaufortia .- Beaufortia is one of those fine old genera that of late have rather been neglected; for who is it that does not admire a good specimen of B. decussata, when well grown and well bloomed. Indeed, no collection of hard-wooded greenhouse plants should be without one or two good specimens of it. The mould which best suits the genus is a very sandy peat, well broken, but not sifted. Pot early in spring, with the other Australian plants; drain well, and make the mould firm about the roots, and avoid over potting; this should be particularly attended to while the plants are young, for nothing is so injurious to hard-wooded and fibrous-rooted plants, in general, as over potting. If the plants are young, the peat may be sifted, and very sandy; but when they get large and strong, on no account should the mould be sifted. They require to be kept in a light and airy part of the greenhouse, at all seasons of the year: and they never should be turned out of doors during summer, as it is certain to kill, or greatly injure them. They require, however, to be shaded, as recommended for other Australian plants, during the height of the summer's sun. Cuttings of the tops of the young shoots, about one inch long, taken off about June, prepared in the usual manner, and planted in sand, the pots being first well drained, and then filled to about one and a half inch of the top with very sandy peat, and the rest with sand, pressed, watered, and planted, as previously recommended in the preceding papers, covered with a glass, and placed in the propagating house, but not in heat, will root tolerably free. Beaufortia, decussata, sparsa, carinata, splendens, and Dampieri, are splendid plants.

Callistachys.—In places where plenty of room is to be had, the genus Callistachys should not entirely be discarded, as they are, in general, free flowering plants, and of easy cultivation; and the few following directions will be found applicable to the genus:—Pot early in spring, in sandy peat: some cultivators use peat and loam, but I never found the plants to grow so freely in it as they do in peat and a little sand, in which I have grown and flowered them freely. They require to be kept in the greenhouse at all seasons, and shaded, as previously recommended for the preceding genera. A few of the strongest of them may, however, be turned out of doors during the summer, as they will bear it better than many other plants; they must be kept in a shady place, though not under trees, on a good bed of coal ashes, to prevent worms from getting in the pots. Most of the plants of this family ripen seeds freely, which ought to be sown about February, in sandy peat, finely sifted; the seeds covered

lightly, and placed in a gentle heat in the propagating house, or on a shelf in the stove. As soon as the seedlings have formed their first leaves, they ought to be potted off (which is generally in about six weeks after they are sown) in thumb pots, in very sandy peat, after which they may be kept in the propagating house for about a month, until they get a little established in their pots, and then placed in a frame or greenhouse, where they ought to be kept for the first summer, and afterwards treated as recommended for old plants. C. lanceolata, ovata, cuneata, retusa, and linarifolia, are pretty.

Linum.—This genus contains plants both hardy and tender, among which are annuals, perennials, and ligneous plants; but I do not intend to make any remarks on any of the species, except those which come under the denomination of greenhouse plants, as at present it would be foreign to the purpose of these articles to make remarks on any other. There is not many plants of this genus that belong to the greenhouse; and the few that do, require dissimilar treatment, as L. arborea, which will grow freely in sandy peat, potted in the usual manner. The pots in which they grow require to be rather large, as they succeed best with a good deal of room for their roots to extend; indeed this species does well out of doors, and then it is not at all particular as to soil: provided the soil be rich and good, it grows freely and flowers profusely, and I have never known it to be killed out of doors, except in the winter of 1837-8, which destroyed all the plants we had out of doors. winter was indeed destructive to plants that stood out many previous winters. Cuttings taken off in any of the summer months, planted in a pot of sandy peat, and placed in bottom heath will root freely. L. trigynum requires different treatment from L. arborea. L. trigynum put in early in spring in a hot bed will root very freely, when they ought to be potted off immediately, and kept in the greenhouse during summer. Old plants should be potted early in spring in peat and loam, using a good sized pot, and draining well. require to be kept in the greenhouse during summer, and to be frequently syringed, in order to keep them clean from the red spider, which they are very subject to; if an old plant is turned out in the border of a conservatory early in spring it will grow luxuriantly, and flower freely during the summer and autumnal months. From the luxurious growth of the plant during summer, the wood being soft, it is very apt to damp off during winter, though it will sometimes grow and flower freely for several years; however, if the plant is much injured in winter it is much better to replace it with another, adding a little fresh mould to the place, previous to planting: if the plant is strong, it will soon grow freely and flower profusely; this is the best manner of growing this plant with which I am acquainted. Many

persons consider it difficult to grow, and they, consequently, keep it mostly in the stove; but if they treat their plants in the way I have just recommended, they will answer much better. The other greenhouse species, if potted in peat and loam, and kept in the greenhouse, will grow and flower freely. Linum arborea, trigynum, Africanum, quadrifolium, suffruticosum, and Cumingii, are very pretty plants.

[We have again to thank our excellent friend S., and shall feel obliged if he will favour us with his address.—Ep.]

(To be Continued.)

REMARKS ON THE SCENERY AND TREES OF MACAO.

BY A RESIDENT.

The following remarks from an esteemed friend at Macao, will, we have no doubt at the present juncture, be read with interest :- " It is the hot weather now, (July 28, 1840,) which will continue until the beginning of October. The thermometer is rarely below 87 deg. and was for a few days at 90 deg. Would that I could describe to you the beauties which this climate produces in the botanic world! the variety of flowers, leaves, and trees is so great that I see something new almost every time I walk out. The earth teems with vegetation. The walls are generally covered with elegant creepers, and the night blowing cerus hangs and shines in the moonlight like a part of the moon herself. I never had any idea that trees bore such splendid flowers as do some here. One in our garden bears a bright scarlet blossom, resembling a number of butterflies resting together. The pomegranates of scarlet, pink, and white colours, are beautiful. One shrub appears to be covered with snow, its blossoms are so delicate. The large and small jasmines grow about our path amongst the paddy (rice) fields, and ever and anon the elegant waving bamboo enriches the scene. This may appear to you like extravagant language, but I cannot tell you of half the loveliness which I constantly see. Only those who know oriental scenery can imagine the effect of the palm, the plantain, the bamboo, and other bright green and luxuriant trees which we here From all the seeds which you packed up, not one flower has appeared. I gave a part of them to several persons here, but none grew. I do wish often for some of our home friends amongst these gorgeous beauties, and especially for the fuchsia, which I never see, and which I think would be splendid here. If in the mean time I cannot get seeds or plants, I am trying to get a collection of dried flowers and leaves, so that you may see I wish to do what I can."

ALPINE PLANTS—THEIR CULTURE AND PROTECTION.

BY P. P.

Under this title gardeners form a general assemblage of such plants as are dwarf, small, or difficult to cultivate, some of which, instead of being alpine, are arenarious, sea-side, or bog plants. A collection of alpines properly consists of such plants only as grow on high mountains, they are universally low, bushy, and mostly evergreen. In their native situations, they are covered with snow the greater part of the year, and consequently never experience excess of heat or cold. In consequence of their vegetating at so great an altitude, they are surrounded by a light, thin atmosphere, mostly charged with moisture. The soil in which they grow is soft, black, and peat-like, filling up the crevices of the rocks, or forming a thin stratum on the surface. In England, alpine plants are often planted out on rock work and in shady borders; but experience shows that they never succeed well or long in such situations, we therefore should endeavour to imitate their natural habits, and plant them in pots, protecting them, in winter from too much wet, by placing them in a cold frame or pit, where they ought to be firmly plunged in coal In addition to the glass, a covering of mats should be added in frosty weather, and if very severe, left constantly on. month, they will begin to show signs of vegetation, and should be carefully repotted, dividing such as it is desirous to increase. pots in which they are placed should be sixties, and most efficiently drained; the soil in which most of them will thrive should be composed of one-half light sandy loam, and one-half good peat; if the loam be rather strong, a quantity, not more than one-sixth part, of fine white sand should be added, and a little well-decomposed leaf mould will be a beneficial addition. As they are repotted, they should be again placed in the frame, to protect them from heavy rain until they have taken root. Some few of them are annuals, and some of the perennials will have shed their seed during the summer, and then die; it is therefore advisable to let the pots in which they grow remain undisturbed for a time, and in all probability a stock of young plants will make their appearance. Seeds of any kind which have been saved, should now be sown in pots of finely-sifted soil, scattering them thinly on the surface, that the plants may have room to attain a considerable size before they are potted off, as they are very liable to damp off if potted when small. The summer station for alpines should be chosen with an aspect as near north as possible, and where they will not be exposed to the sun more than two hours in the morning; but they must by no means be under the shade, or drip of

trees. They should be placed on, or plunged in, finely-sifted coal ashes, and every means taken to keep worms from them. As there is no class of plants which are sooner destroyed, either by drought or excess of heat, too much attention cannot be paid to watering them, in order to keep them, and the ground around them, constantly moist; but they should never be indiscriminately watered all over with a coarse-rosed watering pot, or exposed to heavy rain. In the month of November, they should be placed in their winter quarters, at which time the pots should be carefully examined, and any that are infected with worms should be turned out of the pot, and the worms picked out, without disturbing the boles. After they are placed in the frame or pit, all the air possible must be given them in fine weather, and they must be carefully and sparingly watered, examining them frequently, and removing all signs of damp or mould that appears.

ON THE GROWTH OF NEMOPHYLA INSIGNIS. BY A. PARSONS.

If you think the annexed of any use in your little Magazine, it is at your service to make what use of it you please. I know there are plenty of gardeners and amateurs who can and do grow the Nemophyla Insignis in a very superior manner, therefore it is not to them this little article is addressed, but to those who have so signally failed in the cultivation of this fine but much neglected annual. I sow my first seed on or about the first day of August, in forty-eight pots, four or five seeds in each pot. I sow again about the first of September, I then place them in the front of a greenhouse (a cold frame is equally as good, or perhaps better) till they are well up and in rough leaf, paying particular attention to the watering; as I find this a most essential point to attend to. As soon as they are well established. I thin them all out, but two plants in each pot, and in this state I let them grow till they begin to show the first signs of flower stalks; I then pull out the weakest of the two plants, and put a neat stick to the other at once, watching every opportunity to tie the plants as fast as they grow, for the least neglect in this stage of their growth will prove of the most fatal consequences, as they are by nature exceedingly brittle. About the beginning of the year they will begin to make good strong bushy plants, and fill the pots full of roots; I then shift them into thirty-two pots, with plenty of drainage to carry of the stagnant water, and put a neat stick to each of the shoots, in a sloping direction from the plant, and continue to tie every shoot neatly to a separate stick as they advance. I never let them want for water, and I give them abundance of air every mild day, by this attention I get my Nemophyla Insignis two feet highand three in

circumference, which I never could obtain by the common method of growing three or four in a pot, and not sowing the seed till the middle of January. The compost I use is a rich light one, the same as I grow my Geraniums in. I find this treatment to suit Schyzanthus and Mignonette, equally well. You can scarcely imagine the splendid effect which a plant of this beautiful annual has when grown in this way.

CYCAS REVOLUTA, AN ACCOUNT OF ITS FLOWER-ING AND FRUITING, AND HOW TO CULTIVATE.

BY MR. M'LAWRIN, GARDENER TO SIR GEORGE SITWELL, RENISHAW HALL DERBYSHIRE.

According to your wish I herewith send you a description of the Cycas revoluta that fruited here last year, 1840.

The height of the trunk from the surface of the soil to the base of the crown or pedicles two feet nine inches, the height of the crown ten inches, the circumference of the trunk, at the thickest part, two feet five inches, and at the smallest part two feet three inches, by which you will perceive it is nearly of an equal thickness throughout. There are forty leaves, which are from four feet ten inches to five feet one inch. The stem is perfectly clear of the remains of all former leaves near to the top, having been shaved smooth six years ago, in order to be cleaned from insects. The treatment that I gave it was as follows:-In 1835, when it came under my care, it was in a pot, and rather sickly in its appearance. I turned it out of the pot, and nearly disrocted it, and removed it into a square box, where, during the summer, it put up a crown of leaves. As the cold weather set in, it was only protected from frost, and no water was given to it till January, when the house where it stood (a vinery) was commenced to be forced; it was then copiously watered, and, although it did not throw up another set of leaves, the box in which it was planted rapidly filled with roots, and the plant exhibited symptoms of robust health. The same treatment was continued, and it put up most beautiful heads of foliage every alternate year. In February last the centre of the plant began to enlarge, and, as I thought, showed symptoms of putting up leaves as usual, and this appearance continued till the beginning of April, (1840), when the spadix began to open, and the flower became obvious, and continued gradually to develope itself till the end of May, when it began again to close. In a few days it showed a tolerably close obtuse cone of fourteen inches diameter. This, no doubt, is a provision of nature first opening for the pollen of the male, afterwards shutting for the protection of the young

fruit, the thorny fringe of the spadix offering a formidable opposition to intruders. It remained closed till about the middle of August, when it began again to open and display ripe fruit of a beautiful orange colour, in which state it continued till October, when it began to drop off. I have a young plant out of doors; the protection I am now giving if is very slight, and should it survive the winter I shall have great pleasure in reporting to you the result, that is, if you think it worth having.

Renishaw, Jan. 11, 1841.

[We shall be very happy to receive the proffered account, believing that this plant is much hardier than is generally supposed.

Some of our readers may not be aware that the Cycas revoluta, or Sago Palm, produces male and female flowers on separate plants; and from the above description, it appears the one in question is a female plant. A male plant, we believe the first in England, bloomed, under our care, at the Sheffield Botanic Garden, in 1839. There is also a female plant at Wentworth House, in the same neighbourhood.—Ed.]

THE MAGGOT IN THE ONION.—ADDITIONAL REMARKS.

BY A GARDENER.

I beg to inform you that the result which I have come to respecting the grub in the onion is from three years' experience. In 1838, I first found out from what insect the grub was produced. In 1839, I was only partially successful in preventing the fly from depositing her eggs on the young onions; but in 1840, by applying the mixture as I before stated (see p. 180), I was completely successful in preventing any appearance of the grub, and in having a most excellent crop of onions. I shall further explain to you by and by, and also notice your Constant Reader's query, with reference to his finding the grub in the stem of his onions after the bulbs were rotted.

THE CULTIVATION OF THE RANUNCULUS, AND HOW TO PREVENT THE DESTRUCTION OF THE WIRE WORM.

BY Z.

In looking over yours, and several others of the Floricultural Magazines, I have frequently seen a variety of methods for cultivating the Ranunculus; I will now just introduce to your notice a few remarks on my mode of cultivating this beautiful little plant, the Ranunculus. When looking over the beds, it is often a matter of disappointment, that about the time when the plants are expected to

be throwing up their bloom stems, that many of the leaves appear yellow, and assume a very sickly appearance, and if the plants are examined, it will be found that the small tubers on roots have been destroyed by the wire worm, or by a small brown beetle. It is my opinion, that those two kinds of insects are more destructive to the roots of Ranuuculus than any other kind of insect that has yet come under my notice, therefore, as I have always found a preventative to be better than a cure, the following is the method which I have adopted for the purpose of expelling the intruders.

I always prepare my compost early in the autumn, I lay it in large heaps, well exposed to the frost; in the winter, so soon as the frost is sufficiently severe to freeze these compost heaps to the depth of one or two inches, I then take off all the frozen parts. and remove it to an exposed situation, and I renew this operation every two or three days, so long as the frost continues, until I have got as much as I require for the beds. In the month of February, I break the soil fine, and fill the beds from twelve to fifteen inches deep, which I consider a sufficient depth for the roots of the Ranguculus. I shall not dwell much upon the soils, as I have so very frequently seen them treated upon by different cultivators, I shall merely add, that I grow my plants in a mixture of sandy loam leaf mould, and a little peat soil; but I very frequently grow them in the same soil for several seasons, by taking it out from the beds early in the autumn, and adding a little fresh compost to it, and by laying it in heaps and treating it as I have before stated, which is all that I think necessary. The beginning of March is the time which I prefer for planting, this is four or five weeks later than is generally practised. I always steep the roots in water for six or eight hours before planting them, by experience of this method, I find that the roots begins to vegetate as soon as they are planted, and come equally as early into bloom as those which were planted much earlier, and by this mode of treatment I find that the crowns or tops of the roots are not so liable to be killed by the frost, as those which were planted in January or February; and as an instance of this fact, if the beds are examined when the plants are just coming out of the ground, it will very often be found that in several places the roots have vegetated, and it will be found that the tubers are quite sound, but that the top or crown is dead. A similar effect to this is often seen in the roots of Dahlias, when the tubers swell, but have no eye or crown by which they can send up their shoots.

This I attribute in the Ranunculus in most cases to proceed from the effects of frost, when it is severe, before they vegetate in the ground. I have practised covering the beds with tanners' bark after the roots were planted, and I have sometimes applied long litter from .





the stables, but I find the above method the least trouble, and also to answer the best. The soil which I use for the growth of Anemones, Carnations, and Pinks, I treat exactly in the same manner, as I find that the wire worm is equally as destructive to the roots of these as it is to the Ranunculus.

[The above has been sent us by a practical gardener and florist, who has recently left his last place, and would be found a most valuable servant, should any lady or gentleman be in want of an excellent gardener.—En.]

ON THE CULTIVATION OF THE COMMON AND VARIEGATED HOLLY, WITH THE VIEW TO THEIR PRODUCING BERRIES.

BY AN ADMIRER OF EVERGREENS.

The most striking features of beauty that present themselves in pleasure grounds and shrubberies, during part of the autumn and winter months, is a choice collection of evergreen and fruit-bearing trees and shrubs; and it is my opinion that we have very few, if any evergreens which look more splendid than the different varieties of holly, when grown so as to produce a profusion of scarlet berries, but more particularly the variegated kinds, which are generally shy of bearing fruit. I was very much surprised and delighted, this winter, in seeing a number of the different varieties of this plant, about three feet six inches high, completely loaded with firm scarlet and red berries; on enquiry I was informed that the plants were taken up out of the natural ground in the spring season, when they were about two feet or two feet six inches high; they were then placed into pots just the size that would admit of the roots and a little light soil. Afterwards they were plunged into the borders, where we noticed them, and are now full of fruit. By this treatment they can move the pots into the flower borders in the winter, where they have a most pleasing effect, at a time when all herbaceous and other flowering plants are cut down.

REFERENCE TO PLATE LIX.

LADY MARY BENTINCK PANSY. (Fig. 1.)

This beautiful var. of Pansy was raised by Mr. Tillery, gardener to his Grace the Duke of Portland.

NONPAREIL PANSY. (Fig. 2.)

This is also a pretty var., and has been raised by Mr. Parsons, of Enfield.

NOTICES OF NEW PLANTS.

ECHEVERIA LURIDA. Lurid Echeveria.

Bot. Reg.

NAT. ORD. CRASSULACE. CLASS DECANDRIA PENTAGYNIA.

A greenhouse perennial, similar to E. secunda, differing from it, however, in having longer and more blunt leaves, which are deeply stained with dull purple. The flowers too are a richer scarlet.

GONGORA BUFONIA. Toad-skinned Gongora.

[Bot. Reg.

NAT. ORD. ORCHIDACEÆ & VANDEÆ. CLASS GYNANDRIA MONANDRIA.

A native of the Brazils, with pale whitish green leaves, and flowers spotted with dull purple upon a dirty yellow ground. It will succeed with the same treatment as other orghidese.

EUTHALES MACROPHYLLA. Broad-leaved Euthales.

Bot. Reg.

NAT. ORD. GOODENIACEÆ. CLASS PENTANDRIA MONOGYNIA.

A greenhouse herbaceous perennial, growing from three to four feet high, producing a profusion of gay yellow and brown flowers during the summer and autumn months; it is of easy culture, and strikes freely from cuttings. It will doubtless thrive well and flower abundantly in our flower gardens during summer, but will not survive the winter without protection.

ÆSCHYNANTHUS GRANDIFLORUS, Large flowered Aschynanthus.

NAT. ORD. CYRTANDRACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

A very showy stove plant from Nepal, with lanceolate glabrous leaves, and producing umbels of rich orange scarlet drooping flowers. It succeeds well if placed in a pot, though in its native country it is an epiphyte.

TROPÆOLUM MORITZIANUM, Mr. Moritz's Indian Cress. [Bot. Mag.

NAT. ORD. TROÆPOLEÆ. CLASS OCTANDRIA MONOGYNIA.

This new and highly beautiful plant is a great acquisition to our gardens; it flowered for the first time in the greenhouse at the Glasgow Botanic Garden, in July; it also grew vigorously in the open border, but did not flower. However, there is little doubt but it will flower freely in the open air, when its cultivation is better understood. Its leaves are peltate, with seven to nine shallow obtuse lobes, each lobe having a callous point, of a dull orange colour. The flowers moderately large, with deep ovate bright red sepals; the petals are longer than the calyx, of a bright orange, marked with red veins, the lamina deeply cut into a bright red fringe.

VANDA TESSELATA. Tesselated-flowered Vanda.

Paxton's Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This splendid plant is known under the name of V. Roxburghii inmany collections; it has long been introduced into this country, but it is increased with such difficulty, and seldom produces its richly chequered blossoms, except upon large or old specimens, that it is by no means common, and its noble flowers are seldom witnessed. Mr. Paxton observes "It can be cultivated in a rough wooden basket, or one formed of thin stripe of wood, with numerous openings at the sides and bottom; or, again, may be attached to a large block of wood with furrowed and durable bark. In either position it should derive most of its nourishment from the atmosphere, and not be planted in heath soil or any earthy compost. Moss, pieces of decayed wood, or any half decomposed woody vegetable matter, will be serviceable around the roots, when baskets are employed, and a little moss may be used if a simple log be chosen.

MALVA LATERITIA, Pale Red-flowered Mallow.

Bot. Mag.

A hardy herbaceous perennial from Buenos Ayres, with cordate, deeply, three to five lobed leaves, and moderately large flowered, with a yellow centre and a deep rose coloured ray.

ORTHOSIPHON INCURVUS. Incurved Orthosiphon.

Bot. Mag.

NAT. ORD. LABIATEÆ. CLASS DIDYNAMIA GYMNOSPERMIA.

A sufficuticose stove plant, with serrated bright gum leaves, about three inches long, and producing a spike of handsome pale pink flowers.

ANGELONIA CORNIGERA. Horn-bearing Angelonia.

Bot. Mag.

NAT. ORD. SCROPHULARINE E. CLASS DIDYNAMIA ANGIOSPERMIA.

A tender annual from the Brazils, growing a foot or more high. Its leaves are lanceolate, slightly hairy and entire. The flowers are of an extremely rich purple the upper segments sprinkled with velvetty dots. They are a beautiful object for the microscope.

HIBISCUS WRAYÆ. Mrs. Wray's Hibiscus.

Bot. Reg.

NAT. ORD. MALVACEÆ. CLASS MONADELPHIA POLYANDRIA.

This is a beautiful greenhouse shrub, with large lilac flowers, which it produces in abundance the greater part of the year. It is of easy cultivation, growing luxuriantly in any common soil, attaining the height of six or eight feet in one season, if planted in the borders of a conservatory. It is easily propagated by cuttings.

CHELONE LYONII, Mr. Lyon's Chelone.

[Paxton's Mag.

NAT. OBD. SCROPHULARIACE ... CLASS DIDYNAMIA ANGIOSPERMIA.

This really handsome hardy herbaceous plant was introduced from North America, in 1812; it is one of the few herbaceous plants that will thrive and flower freely in situations where they are shaded by either trees or shrubs from the greater part of the summer sun. Mr. Paxton says, "We observed exceedingly vigorous specimens in several gardens last summer, where it appeared almost impossible that the direct light of the sun should ever reach them. They were, nevertheless, flowering in fully as prolific a manner as plants of the same species in more open spots." It grows about two feet high, and produces spikes of large purplish pink flowers in July, August, and September.

GLOXINIA RUBRA, Red-flowered Glozinia.

Paxton's Mag.

2 F

NAT. ORD. GESNERACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This splendid plant was introduced by Messrs. Young, of Epsom, in the spring of 1840, and flowered in their stove in September last. "When the blossoms first expand, they are of a deep rich blood red colour, the throat being of a far

darker tint with a slight shade of brown. After having been opened for some time, they assume a paler hue, of which crimson is the chief constituent, and at the lower part of the throat a tinge of blue becomes perceptible, the upper portion still preserving its comparatively intenser shade." We invite all lovers of novelties, to this as one of the most ornamental plants that has been added to our collections for some time.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

PLEUROTHALLIS RECURVA.

A small creeping plant with short recurved spikes of dull pale purple flowers.

PLEUROTHALLIS LUTEOLA.

Another plant similar to the last, but with small yellow flowers.

APORUM SINUATUM.

From Sincapore, having the habit of A. anceps, but its leaves are much narrower and longer, and the flowers pale yellowish green.

GONGORA FULVA, VAR. VITELLINA.

A very pretty variety, with bright yellow flowers, less spotted, and altogether of a more lively aspect than G. fulva.

ARUNDINIA BAMBUSÆFOLIA.

A charming epiphyte from the hotter parts of India, with the foliage and habit of a small Bamboo, and the flowers of a Catleya.

BRASSIA LAWRENCIANA.

A pretty species from Brazil, with pale-yellow and very sweet scented flowers. APOREM CUSPIDATUM.

A plant of no particular interest.

DENDROBIUM TETRAGONUM.

A pretty species, its flowers are spider-like, yellowish-green, bordered with brownish red, the lip pale yellow, streaked with narrow bands of crimson.

CLIANTHUS CARNEUS.

This has been dispersed through the country with exaggerated accounts of its beauty under the name of Strebloriza speciosa; and, although it is not the magnificent plant it was said to be, it is certainly well worthy of cultivation. It is a greenhouse creeper, with fine evergreen foliage, and producing abundance of bunches of flowers for a long time.

ACACIA PLATYPTERA.

A greenhouse shrub from Swan River, with the general characters of A. alata.

SOBRALIA SESSILIS.

A native of Demerara, with a red like stem and stiff ribbed taper-pointed leaves; it produces from the summit of the stem a single rose coloured flower, which is very fugacious.

IMPATIENS ROSEA.

An Indian species, with delicate pale rose coloured flowers.

ARMERIA FASCICULATA.

A hardy species, well worth cultivation, especially as a rock plant. It is shrubby, forming a pretty bush, with long stiff leaves, like those of a pine.

PIMELEA SPECTABILIS.

One of the very prettiest greenhouse shrubs from New Holland. It has glaucuous narrow leaves, arranged in four rows, and large heads of pink flowers collected within broad floral leaves, richly stained and bordered with crimson.

PHOLIDOTA UNDULATA.

A plant of little beauty.

EPIDENDRUM GLADIATUM.

A Mexican species, with green flowers, like those of E. nutans.

IPOMEA BATATOIDES.

Dr. Lindley observes, that he thinks the beauty of this species excels that of any other in our gardens. The only plants of it in this country are in the possession of the Horticultural Society.

REVIEW.

Catalogue of Ferns, after the arrangement of C. Sprengel, with additions from C. B. Presl, and references to the Authors by whom the species are described; to which is added, a Synoptical Table of C. B. Presl's arrangement of Genera. By J. RILEY. London, Hamilton, Adams, and Co.; and W. Dearden, Nottingham.

Our Author is decidedly one of the most enthusiastic cultivators of Ferns of any person with whom we are acquainted; nor is this a pursuit to which his attention has been but recently directed, but with him is one of many years standing.

Mr. Riley is an amateur; and his object in publishing this Catalogue appears to be with the view to facilitate the exchange of plants or specimens; and the plan adopted is admirably adapted for this purpose. The generic and specific names are given, with a reference to the author of the specific name. To each page there are affixed three columns for the enumeration of plants or specimens; and by exchanging this catalogue, filled up with the plants or specimens in the possession of the sender, his correspondent would at once be informed what to send in return.

The Synoptical Table will be of great value in the naming of genera,

MISCELLANIES.

Leycesteria formosa is by no means a splendid plant; but it is, under every circumstance, a striking and very interesting one. Its decidedly hardy character, the amplitude of its foliage, the extreme rapidity of its growth, and the ease with which it is produced from cuttings, layers, or seed, all point it out as an object well calculated to form underwood or shelter for game, &c.—Loudon's Gardener's Magazine, third series, No. 1.

"In visiting such a place (Felthorpe Park, the seat of J. Geldart, Esq.), the following suggestions naturally suggest themselves to us, namely, that the nature of trees is beginning to be understood, and, consequently, that a great proportion of the waste land in our country may be converted either into fruitful fields, or made to assume the appearance of fertility. So lately as forty years ago, the oak tree was assigned to rich sheltered valleys, and there only; and if any one had been bold enough, in those times, to have planted it elsewhere, he would have been subjected to the ridicule of his neighbours. We trust the time is at hand when, so far as regards the hardy trees of Britain, there will be less distinction made as to soil or situation; not that we do not believe that certain soils are favourable to the growth of a particular species of trees, but because the fancied partiality of all trees to certain soils has deterred many from planting altogether. It is now a well-known fact, that if sheltered when young, an oak will grow almost anywhere; and that a sycamore will grow on any land, without shelter."—Gregor's Eastern Arboretum.

"Evergreens, from the verdure of their foliage and the readiness with which loss of vitality is detected by the change in their colour, present the best facilities for examining the effects of wintry blasts; and it will be observed, on investigation, that they are much more frequently injured from this class of agents, than by the intense frost. Hence, first, the importance of strewing dry litter or fern leaves over dwarf rhododendrons, and other evergreen shrubs, during the occurrence of such winds as those of the middle of last December; and, secondly, the necessity for sheltering all tender plants more thoroughly at these periods. Let the fact herein asserted once be thoroughly known, and it will be impossible for caltivators to treat so slightingly as they do the operation of winds."—Paxton's Mayazine of Bolany.

A handsome, efficient, and durable sheep fence for a lawn may be made of the following form and dimensions, at 6d. per yard; one stile per yard (cut by a saw mill) from well-grown larch-trees, stile four feet long, three inches by two, having the lower end charred and driven one foot into the ground. One rail at top, three inches broad, one and half inches thick, straight, and equally cut (by a saw mill); three rails of similar dimensions, the lower edge of lowest, six inches from the ground, and the others placed above at a distance of four and half inches from edge to edge; this, with lone coat of coarse stone-coloured paint, looks neat and will last for seven or eight years.

BONE-DUST.—A very great advantage might be obtained from the use of this portable manure, in the planting of hard woods, giving a handful or two to each plant. A little nursing at the root, or food, seems at least as necessary as clothing

or nursing by firs; the starving, and consequently stunted state in which they often linger for years, exposed to the mutilations of vermin, might thus be avoided, and the expense repaid tenfold. Malt-dust, I have known to be applied with good effect, and particularly so in the rearing of thorn hedges.—A Planter.

There are few professions which may not be learned in less time and with greater ease than that of a Gardener. To become a good gardener, a man must have a natural taste for the profession; he must be thoughtful, steady, and industrious, and possess a spirit of enquiry into the nature of vegetation, a thorough knowledge of which is only to be obtained by close application of the mind. He must likewise possess a genius for experiments, to enable him to ascertain how far art may be made useful in assisting nature; and forethought, to enable him to provide against, as well as to get through, difficulties, which an unfavourable season, or other circumstances may bring him into. He must also be endued with no common share of perseverance, and equanimity of temper, for in his profession, there is no such thing as proceeding, with certainty of success; and in spite of all his care, and attention to soil, temperature, and moisture, some of his choicest plants will die, and others will not thrive, until, by perseverance and experiment, he finds what is suitable to their nature. If you will give yourself the trouble, and have patience to watch a gardener through his various occupations, all the seasons of one year, you will be convinced, that his life is one of continued reflection, and anxiety, that he labours more with his brain than his body, and that he may justly claim a superior degree of estimation and reward .- J. P.

The most persevering enemies, and those which we have most difficulty in exterminating from our gardens, are the snail and slug; they seldom appear above ground, in cold or dry weather, but from their habitations under the soil, and attacking the roots of plants, frequently destroy them before we are aware of their presence. They are, however, easily detected, by an attentive observer; as the leaves of the plants which they infest, will have the appearance of being gnawed in their growth, and the flowers will frequently die off as soon as they appear: and this will be the case, more frequently with many of our early flowering bulbs. The easiest way of destroying these pests, is to stop upthe orifice of a garden pot, and turn it down over the plant in the evening, and early in the morning, you will, in all probability, find some of them attached to the pet; by persevering. I have invariably been successful in stopping their ravages by this method.—John Green.

QUERY,—SIR,—I have been a subscriber to your Magazine for a considerable period, and have often felt much interested in the instruction that has been communicated by yourself and your correspondents, on the propagation and treatment of plants and flowers, which leads me to communicate with you, for the purpose of obtaining information as to the best mode of managing, in a private dwellinghouse, that most valuable and beautiful plant, the Camellia Japonica. I will state the facts, and then submit my query. My house is situate in a town in the north of England, perfectly open and airy in front, the aspect nearly due south. My plants, of which I have several, consisting of double red, pink, and white, and others, with the names of which I am not acquainted, are placed in wicker baskets, on the floor, in recesses, near to my drawing-room windows, which are down to the ground; there are no shutters, but a linen blind is drawn

down to the ground at night, and in very cold or frosty weather, the baskets are withdrawn a few inches into the room, which is in daily use, and a fire in the winter months, consequently regularly lighted, which usually goes out about one o'clock in the morning; but my servant informs me that when she goes in to draw up the blinds, and re-light the fire, the room never feels cold. The plants in the winter time are usually watered, always by myself, every other day, but sometimes not until the third morning, constantly with rain water, about, or rather above, the temperature of the room. I endeavour that the plants shall never become thoroughly dry, or very wet, and am careful to drain the water that may run through them from the saucers in which they stand. Occasionally before the usual watering time has arrived, I have observed the plants to be dry at the top of the pots, but have imagined them, as they never droop, to be moist below. When the weather is mild, the windows are almost always opened in the middle of the day, and some portion of air will necessarily pass into the room when they are closed. I occasionally also, in mild weather, place the plants for a few minutes in the balcony, and sprinkle them over with water of the description before mentioned, and am at all times careful to keep them free from any accumulation of dust or dirt: occasionally also, that is about every two or three years, I send them in the spring to the nursery, where they are prepared to be re potted. In the summer time the plants remain, of course without fire, in the same place as in winter, the windows are then generally open, and the plants are screened from the sun, being then more freely watered, and copiously so when flowering or in a growing state Under the above treatment the plants have at all times of the year a healthy appearance,-they make, in general, good wood, flower buds, &c.—and these continue to increase in size till they arrive at what may be termed the last stage of expansion previous to that which takes place when the flowers come out. And now follows the lamentable sequel to my narration; instead of their expanding, and my eyes being feasted with the expected and delightful sight of some, in my opinion, of the most beautiful flowers in nature, the hoped for reward of all my care and attention, several of the buds, particularly I have observed on the double white, begin to fall off, in an apparently perfectly healthy state, whilst the calix on others commences to separate, and the buds soon afterwards wither up and perish. Now the question I wish to have solved is, in what part of my treatment do I err, or what can I do more, or leave undone, if I do too much to ensure a larger number of flowers than it has been my lot Perhaps yourself or some of your correspondents who generally to secure? may have given their attention to this subject, will favor me with a reply, and afford the benefit of such experience to your most obedient servant,

January, 1841.

AMATEUR.

[Our excellent correspondent having entered so fully into this subject, we think it better to give it in full, and we trust those who are familiar with the treatment of this very beautiful plant, will favour us with such remarks on its culture and general treatment, as are likely to bear upon the points to which he refers.—ED]

QUERY.—SIR,—I have taken the liberty of soliciting your kind attention to the following inquiry, through the medium of your excellent Magazine. I wish to know what sort of a house you would recommend for growing the fine variety of Persian Melons, having heard something of the melon houses of the late Mr. Knight, but not properly to understand them, as I am persuaded this is a fruit very much neglected. You may find melons large and plentiful, but worthless, especially in the country and small places; flues will be the heat most at my

command; therefore, if you will have the goodness to say what depth and width, they should be, and how situated, so as to have a regular top and bottom heat, what width the house or pit should be, if it will be necessary to train them on trellis work, and what heat to maintain generally, and if a damp or dry atmosphere, and if you could mention a few of the most desirable sorts? I hope these queries will not press too much on your time.

Rotherham, Dec. 19.

A Young Practitioner.

[There are many of our friends who have had abundance of experience on this subject, who, we hope, will have the kindness to notice this query.

ANSWER TO QUERY.—Observing in page 72 of the present volume, a Query on the origin and cure for Canker in the Melon and Cucnmber, I beg to observe, it may originate from several causes, from improper water being used; and it is seldom that canker makes its appearance if that be properly attended to, and all damp, stagnant air excluded: the water should be soft, and properly aired, before it is applied. It frequently originates from improper pruning, &c., insufficiency of heat, and from the mould being too moist by over watering. In all cases of canker, it proceeds from improper management; and the best which I have yet discovered is to lay on the affected part fresh pulverised lime, and a little sulphur, mixed; to be repeated every other day, until the disease disappears; also adding plenty of heat and air, given in quantity sufficient to keep the atmosphere of the beds pure. Plants of either melons or cucumbers raised from cuttings, are not so subject to diseases of any sort, as those raised from seeds, and they are, besides much earlier. On this subject, I may at a future time send an account of some experiments which I have made—R. B. W., Gardener.

Norton, December 17th, 1840.

[As the season for the cultivation of the melon is now approaching, we shall be very glad to receive the article in question at our correspondent's earliest convenience.—ED.]

QUERY.—SIR,—I should feel greatly obliged to be informed, by you, whether the Muscat of Alexandria and the Muscat of Jerusalem are synonymous or distinct varieties; if different, whether the last named variety is considered good? Also, if I can procure the first 14 Nos. and No. 27 of your excellent Magazine, by order from any bookseller, as I am anxious of having it from the commencement? An answer in the January number will confer a great favour on

Dec. 14th, 1840.

A SUBSCRIBER.

[The Muscat of Alexandria and the Jerusalem Muscat are one and the same thing, and one of the best white grapes ever produced.

All the back numbers may be procured from the publisher through any bookseller.—Ep. 1

MONTHLY CALENDAR.

FLOWER GARDEN.—If the weather is mild and dry, such beds and borders as were not dug in the autumn should now be attended to and carefully dug, being mindful not to injure the roots of the plants. Perhaps the best implement for this purpose will be a neat three pronged fork, at the same time being careful that none of the labels or numbers be removed or lost. Where the roots of shrubs are

so entangled as to render digging among them difficult, slightly stirring the surface of the soil and top-dressing it with any light soil, will encourage the growth of the shrubs and give the borders a neat appearance. Lawns and grass walks should now be made, and repaired where necessary, and either laid with turf or sown,—the edges of beds and grass walks, and the verges of gravel walks, neatly cut with the edging iron. In dry weather, sweep and remove from grass and gravel all decayed leaves, worm casts, &c., and roll them frequently. At the latter end of the month, if the weather permit, the more hardy species of herbaceous plants may be planted; and in situations where the soil is light and dry, a few hardy annuals should be sown.

PLANT STOVE.—But few plants will yet show any signs of vegetation, and nothing better can be done than to attend to the directions given for January.

GREENHOUSE .- See Calendar for December.

PARK AND PLANTATIONS.—In mild weather, plant fences and all kinds of deciduous trees. Prune deciduous trees, but not such as are apt to bleed; such as the birch, sycamore, &c.;—the resinous and evergreen kinds are better pruned late in the spring. Thin and fell timber and young trees, but do not meddle with the bark woods. Operations on ground, water, &c., should now be prosecuted vigorously.

KITCHEN AND FRUIT GARDEN.—Sow a full crop of early frames or Charlton peas; and towards the end of the month, some marrowfats and the larger kinds. About the middle of the month, sow cabbage, cauliflower, a little savoy for an early crop, leeks, and round spinach. Also, on a warm border, or in a sheltered situation, early Dutch, turnip, horn carrot, lettuce, and radishes. Plant eschallots, garlick, Jerusalem artichokes, horse radish, a few potatoes, and all kinds of herbs. Prepare ground for a general crop of onions, carrots, parsnips, beet, &c., and complete trenching and digging. If the weather is mild, plant all kinds of fruit trees, and mulch them well. Prune and train peaches, apricots, and all other trees; and dig or fork the borders over after giving them a moderate dressing of well rotted dung. Plant and spring-dress strawberries and raspberries. Make mushroom beds and attend to old ones. (See Calendar for December.) In the fruit room, carefully examine all loose fruit and remove those that are tainted. Fruit that is packed in air-tight vessels will require nothing more than to keep the temperature of the room in which they are as equal as possible.

PINE STOVE.—No fine weather should be lost sight of, but air given at every opportunity, which will strengthen the plants and prevent their assuming a sickly colour. If the plants are bealthy, they will now begin to make roots; and a slight increase of temperature, say 70 deg, will be advisable, with a corresponding increase of moisture.

PEACH HOUSE, VINERY, &c.—This is a good time to commence forcing peaches, vines, &c. See that the stems of any that are on the outside of the houses at work are protected from the frost. (For temperature, &c., see Calendar for December and January.) Set in strawberries, and stimulate them gradually, giving abundance of air and a moderate supply of water. Cucumbers and melons will now succeed well; attend to covering, and be careful not to let them be scalded by the steam from the linings. (See Calendar for December.) Prepare successional beds of asparagus, seakale, and rubarb. Sow kidney beans two or three times, small salad, and a little cabbage and cauliflower for early planting.—In the flower-forcing department, introduce all kinds of flowers in succession. (See Calendar for January.)

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LVIII.-MARCH, 1841.

REMARKS UPON THE ROOTS, &c. OF VEGETABLES.

BY E. F., OF MEIVOD, NEAR WELSHPOOL.

"By Thee dispos'd into congenial soils,
Stands each attractive plant, and sucks and swells
The juicy tide; a twining mass of tubes."

Thomson's Spring .

That the organs in plants, as well as in all organized nature, has an office to fulfil, cannot be doubted by any person who has devoted even but a small portion of his attention to the study of vegetable physiology. But, notwithstanding the relation which the organs bear to individual plants, and to nature, as a whole; yet the most attentive and diligent observer is compelled to own, with the wise King of Israel, that "no man can find out the work that God maketh, from the beginning to the end: though a man labour to seek it out, yet shall he not find it." Still enough of the beautiful harmony and obvious design so manifest in every atom of organized matter, may soon be observed, to enable him to say, "how manifest are thy works! in wisdom hast thou made them all."

Every part of a plant, whether leaf, fruit, flower, stem, or root, affords ample scope for observation and research, and the exercise of a contemplative mind; but the present paper will be confined to a few remarks on the roots of trees and plants.

The primary use of roots is to fix trees or plants securely in the ground, so as to enable them effectually to withstand the violence of the wind, or other hardships to which they may be exposed, and to absorb from the earth that nutriment upon which the plant is to subsist and grow. The place where the cotyledons were situated is that where the root commences, which is generally near the surface of the ground. This neck is considered the most tender part of the plant; that is, a wound received there is more injurious, and more generally proves fatal, than either on the roots or stem, as it effects both the ascending and descending series of vessels. The roots of a tree consist of a principal one, analogous to the stem, and is called the

"tap," or caudex descendens, and from which the lesser branch out, and are called fibrilæ, the points of which are terminated by an organ, called spongioles, which perform the same office in the vegetable economy as mouths do in the animal. The spongioles are the extremities of the roots not covered with cuticle, which, by leaving the cellular tissue bare, are rendered capable of imbibing substances suited to the nourishment of the plant with which they may come in contact. This is done by what is called capillary attraction, a property, possessed by all extremely small or capillary tubes, of raising liquid substances higher than their natural level, which is considered as being aided by the expansion of the silver grain in the tree, caused by the action of the sun during the day, and its contraction by the coldness of the night. The cellules being smaller at the extremities of the rootlets than in any other parts, are so minute as to exclude all substances which are not either gaseous, or capable of solution by water, or otherwise. Silex, which, at first sight might be thought incapable of being dissolved, is, however, found to enter pretty much into the constitution of plants, especially the glumaceous plants, in one of which (the bamboo) it is so abundant, as to exude at the nodi, and is collected by the Hindoos, and sold under the name of tabasheer. Silex is said to be soluble in about a thousand times its bulk of water; hence the relative quantity found in a plant is considered to indicate (at least in some degree) the quantity of water absorbed by the roots. which has evaporated by the leaves.

The mode in which roots grow is very different to that in the other parts of a plant. The former grow by an elongation of the extremities, forming new spongioles at the point of the old ones, as they have occasion to penetrate further into the earth in search of food; while the latter lengthens, not only by the development of the embryo buds at the points of a shoot, but in the internodi. Any person who would examine the distance between the nodi on a young shoot of a plant in full growth, (and more easily to do this, he had better select one of rapid growth,) and by measuring it again in a few weeks, he will find, not only that the sprig has lengthened in the whole, but that the distance between the nodi, which were already formed when he first examined it, is increased. The growth of the ascending series also differs from the root, in that with them new shoots are formed only at the nodi, whereas roots grow from any part indiscriminately, as occasion may require.

"There is, in general," observes an intelligent writer*, "a correspondence between the length and number of the roots of a tree or

[•] Robert Dickson, F.L.S. &c., in one of a Series of papers on the "Natural Theology of the Vegetable Kingdom." Church of England Magazine, Vol. V., page 222.

plant, and the number of the branches, as well as the extent of the area described by them in the atmosphere. The roots of an acacia which were counted, amounted to 62,000, this species being remarkable for its numerous feathery branches. But this balance between the organs of absorption and the organs of exhalation, or evaporation, is not maintained when a plant grows in a very poor soil. Thus the lucerne (medicago sativa) in a rich soil has roots not exceeding two feet in length, the stem, being about two feet high; yet, its roots have been taken from below the face of the escarpment of a sand-pit, as much as thirty feet in length; so that many of the little leaves had to be supplied by a living well, three hundred and sixty times deeper than themselves. Also, the baabab, or monkey-bread tree, (Adansonia digitata), which grows in the sandy soil of Senegal, and rarely attains a height of more than ten or twelve feet, though with a diameter of thirty, and a circumference of nearly eighty feet, possesses a root the ramifications of which spread out an hundred or even an hundred and ten feet, laterally, while the tap root descends vertically to a great depth in the soil." The writer, himself, has often observed this to be the case with plants grown in poor ground. A nursery, with which he is connected, composed of different kinds of soil, part of which is dry and gravelly, and part comparatively rich, though the plants grow with greater rapidity in the latter situation, the roots are much more numerous in the former, which some purchasers seem to be aware of, by preferring those grown in the poor soil. Hence it appears, that plants have a power when food is scarce, of penetrating into the earth in search of it, which was undoubtedly ordained by the Creator, to compensate for the want of locomotion possessed by animals. This, however, is not the cause in the first instance of the tap root descending vertically into the ground. The gravity of the earth causes it to take this direction, which, if counteracted in any way, its direction would be changed. lowing experiment has been made, and it proves the truth of the above assertion. A number of kidney-beans were fixed on the circumference of a wheel and plentifully supplied with moisture; the wheel was kept in rapid and perpetual rotation; when they germinated, the radicles were found to point outwards, and the leaves towards the axis of the wheelt.

[†] Vegetable physiology is to the gardener what the compass is to the mariner; and when the latter voyages without its assistance, his course is, of necessity, tediously circuitous and uncertain; and this is precisely what takes place with the gardener and amateur, whose labours and exertions are expended in vain in the absence of a knowledge of those principles by which alone their operations are rendered in any degree certain. We need not, therefore, say that we are greatly obliged to our excellent correspondent for drawing the attention of our readers to this interesting subject. With the view to excite farther enquiry, let us call in question

The roots of vegetables, in a secondary point of view, (to say nothing of the many kinds that are used for food, medicine, or in manufactures,) perform offices which are very beneficial to man. Were it not for the flexible creeping roots of the maritime grasses, which, by penetrating into the sand in all directions, tend to consolidate it, the artificial embankments raised by man to prevent inundations of the ocean, would soon be destroyed by the storms to which they are exposed. This we find to be the case when embankments are made, and are not either naturally stocked or planted with plants of this nature. As, for instance, the attempt made by the late W. A. Madocks, Esq. to recover from the sea the sands from Pont Aberglaslyn to the point Gest, called the Treath Mawr, by a dyke from Caernaryon to Merionethshire, by means of which, if it had proved successful, he would have obtained some thousand acres of land. was formed of rubble stone, embedded in earth, a hundred feet broad at the base, and thirty at the top; but the earth was soon washed away, leaving numerous apertures for the flux and reflux of the waters; so the speculation completely failed.

But many embankments, chiefly owing to the numerous subterraneous roots of these kind of plants, forming a kind of network, and adding stability to the soil, have succeeded in furnishing an effectual barrier to the inroads of the ocean, and gaining thereby large tracts of valuable land. A great part of the east of Lincolnshire is below the level of the sea, and is protected by a mound of this kind. But the great dyke on the coast of Holland is, perhaps, the most astonishing work of this nature in the whole world. Upon the ground thus gained, there are said to exist about a million of human beings. Upon the

the correctness of the philosophy as to the cause of the radicle of the seed protruding outwards during its germination on the wheel. If we suppose that the revolutions of the wheel upon its axis is a representation of the diurnal motion of our earth, and that the effects of this motion, with reference to the seeds which germinate on its circumference during this motion, is produced by the latter, and the argument tends to this conclusion: it follows that the stems, leaves, and branches of all trees and plants whatever, ought to show a tendency towards the axis of this motion, and that the roots, in like manner, should exhibit a preference to extend themselves in an opposite direction; or in other words, and according to this theory, the order of the vegetable world should be inverted, with the roots of trees upwards, and the stems and leaves embedded in the earth. We, therefore, beg to call the attention of our correspondent to his illustration of the wheel, and if there be any analogy between the revolutions of the latter and that of the diurnal motion of our earth; and if the roots of the seeds protruded outwards, it certainly becomes worth while to enquire, whether the bypothesis thus sought to be established be not rather weakened than strengthened by the illustration in question. We have put the case thus strongly, for the purpose of inducing farther discussion on this interesting subject, being, as vegetable physiology unquestionably is, the foundation of all gardening, and by which the truth, whether of practice or theory, can alone be tested .- ED.

side of the dyke next the sea, the Dutch are at considerable pains in planting a species of reed in spring and autumn, which they consider materially to strengthen the mound by their roots, as also by retaining a large quantity of sand driven against it by the sea, augmenting the original, which is soon consolidated by the roots of the reeds. It is this great work of the Hollander's that is alluded to in the annexed lines:—

"Methinks her patient sons before me stand, Where the broad ocean leans against the land, And sedulous to stop the coming tide, Lift the tall rampire's artificial pride; Onward methinks, and diligently slow, The firm connected bulwark seems to go; Spreads its long arms against the watery roar, Scoops out an empire, and usurps the shore; While the pent ocean rising o'er the pile, Sees an amphibious world beneath him smile, The slow canal, the yellow blossom'd vale, The willow-tufted bank, the gliding sail; The crowded mart, the cultivated plain, A new creation rescued from his reign; Thus while around the wave subjected soil, Impels the natives to repeated toil; Industrious habits in each bosom reign, And industry begets a love of gain." Goldsmith.

In many countries great quantities of sand are thrown up by the ocean, the water receding, leaves it liable to be shifted by the wind, which often does great injury to the lands and property of the inhabitants. On the coast of Cornwall, the currents of the ocean several centuries ago, threw up such an immense quantity of sand as to bury several Villages and their Churches beneath it, particularly that of Peranzabuloe, which has been since discovered and fitted up for public worship. On the coast of the Baltic Sea, in the neighbourhood of Bourdeaux, large tracts of land was involved in like calamity, and it was calculated that in less than an hundred years, nearly twenty villages would be destroyed by it. In order to prevent its effects, the sands were sown with the seed of Pinus pinaster, * and Cytisus scoparius, which soon became a thick forest and averted the threatened evil. Thus we see the binding power of the roots of plants productive of great benefits. Though the means are simple, the results effected by them are highly important. Were it not for the timely remedy obtained through their agency, the inhabitants of the coast of the

^{*} Synomes. P. maritima altera, Du Hani, Du Roi, P. maritima, N. Du Hani, P. syrtica, Thore Prom, sur les Cotes de Gascogne, Pin de Bordeaux, Pin des Landes, Fr. Loudon. The French names were probably taken from the above circumstance. Thousands were in the district of Landes.

Baltic would have been overwhelmed in similar distress, but on a larger scale to that of the Cornwallers previously alluded to.

The roots of plants also conduces to prevent the stony rubbish of mountains rolling down upon the adjacent countries, and slides off the sides of mountains, as that of the Rotzberg, in Switzerland, which happened on the 2nd of September, 1896, and buried the interesting villages of Goldau, Busingen, Uter-Rother, and Lowerz, beneath its ruins; not that they are always capable of obviating these slides, nor could they in this instance; but still their efficacy is very superior to any device which the ingenuity of man could invent, and in their absence, occurrences of this kind would be much more frequent. The rains of those countries where these slides of mountains generally take place, are much heavier than in England; and when the coating of grass is once washed off by the rapid torrents which run down on the precipitous sides of a mountain, it often falls with such force as to cause the earth below to slip, which once commenced, seldom stops till it reaches the bottom.

They are also instrumental in the formation of new grounds out of the alluvial deposits found at the mouth of most large rivers. As, for example, the Rhine, from which a very large part of Holland has been formed; to which may be added, the Euphrates, the Nile, and many others. The deposits of alluvian become stocked with plants adapted to such situations, which, as the ground gradually becomes more solid and dry, are succeeded by others, which could not at first have grown, till, in process of time, by means of draining and cultivation, it becomes capable of being inhabited by man. Plants tend very much towards the drying up of marshy land, by furnishing a larger surface for evaporation than would be otherwise the case, as they evaporate a large quantity of the liquids imbibed by the roots through the leaves, as likewise by the annual decay of the leaves, and in some kinds other parts, adding to the formation of soil. The following extract, as it shows an instance of the formation of new land by the above means on a much larger scale than any that occurs in Europe, will probably be excused :-

"It appears that this eastern coast of Sumatra, which forms the western side of the Strait of Malacca, and extends upwards of 600 geographical miles, from Pedro Point to Lucepara Point, is, in general, low, swampy, and fringed with a continuous line of mangrove trees, growing close to the water's edge, so as to throw their roots into the sea. This almost level country stretches from 50 miles in some places, to 140 in others, into the interior, till it meets with the great range of primitive mountains which run through the middle of the island almost the whole of its length. From these mountains issue innumerable streams, which, after intersecting, in all directions, the

flat country, are poured into the Straits of Malacca through various channels, some of which are of considerable magnitude. Immense quantities of sand and mud, the debris of the mountains, are brought down by the rivers, and deposited along the coast, which, in some places, extend as far as ten miles into the Straits, rendering the navigation of it extremely dangerous, even to vessels of small size. It has been stated, indeed, that the land, in certain places, has gained upon the sea from fifteen to thirty miles, within the last two hundred years."‡

The true mangrove (rhizophora) for there are several other trees capable of growing both in and out of the water, sometimes comprehended under this term, is a very singular tree and admirably adapted to effect this end; it is possessed of no solid trunk, but divides into numerous branches near the base, and rests upon many props, which allow the water to pass freely between them. The seeds germinate while hanging upon the branches, and then dropping into the mud soon become strong plants.

Here we see a noble example of the foresight of the Creator of all things, in causing the roots of vegetables, while penetrating into the earth to obtain the food necessary to their existence, to perform as a secondary object, offices so productive of benefit to his creature man.

Meivod, January 12, 1841.

‡ Anderson's Mission to Sumatra, as quoted in the Quarterly Review.

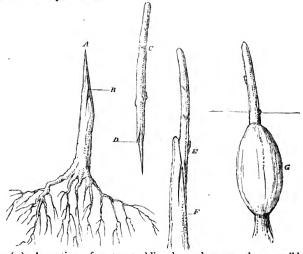
ON GRAFTING.

BY F. R.

A considerable time has elapsed since I troubled you with any communication, but as the season is approaching for the operation of Grafting, I am induced to call the attention of some of your readers to this subject, who may not be aware of the method of obtaining dwarf bearing apple trees, in pots, of eight inches in diameter, as useful and ornamental appendages to small gardens. I have specimens, one of which is a Ribstone Pippin, which has been in a pot eleven or twelve years, blossoming freely, and at one time had a dozen fine ripe fruit on it, yet it has not exceeded the height of two feet, and less than threequarters of an inch diameter in the stem, which is clean and healthy. -I will now give some simple directions, by which any one who may wish to possess similar plants may readily do so. First, procure either by laying bare the extreme roots of any young apple trees, or selecting at the time of planting or removing, a few portions of roots from a quarter to three-eighths of an inch in diameter, and three or four inches in length, with a good supply of fibres attached-select scions of approved sorts, such as Golden Pippins, Margils, or Nonpareil, and proceed to graft them on the prepared stocks or portions of root

by the whip graft process, tie and clay them, then plant in pots of six-inches diameter, with a little drainage of broken pots, in the bottom, taking care to cover them above the clay; give a little water round the edge, and place them in the shade, or a slight hot bed, they will strike freely. The after treatment and training is the same as any other shrubby plant, keeping them to a single stem and occasionally pruning. Cherries may also be treated in the same way, and if placed in ornamental pots would have a pretty effect when in fruit on the dinner table at dessert. As some may like to try the experiment who are unacquainted with grafting, I send a sketch of the stock and scion prepared for inserting the graft, and, if you think it would be acceptable to your readers, I will, at a future opportunity, illustrate the various modes of grafting, inarching, budding, &c.

I beg to congratulate you on the improvement in the floral delineations of your work.



(a). A portion of root cut obliquely, and as smooth as possible with a slit. (b). To remove the tongue of the graft or scion. (c). The scion to match exactly, the oblique surface of the Stock. (d). The tongue of the graft. Care must be taken that the bark is not rubbed up, or disturbed, and that on inserting it in the Stock the bark of each meets at the point. (f). Where the first turn of the matting should commence for firmly tying them together. (g). The operation finished and clayed, the dotted line indicates how deep it should be planted.

Topsham, Devon, January 22nd, 1841.

[The illustrations in question would be very acceptable,-ED.]

ON THE CULTIVATION OF THE MELON, AND THE COMPARATIVE QUALITIES OF CUTTINGS AND SEEDLING PLANTS.

BY R. WILSON, OF NORTON, NEAR STOCKTON.

In reply to your request, of the article alluded to by me, on the merits of melon and cucumber plants raised from cuttings, it is a well-known fact, that they are much earlier when raised from cuttings. and also more prolific, and attended with less trouble as to pruning, &c. on account of their not being so luxuriant as plants raised from seeds, and consequently less succulent, which renders them able to bear any check, or change of atmosphere that may occur, better than they would do, if in a more luxuriant and succulent state; but this will be better understood by the following experiment, which I made in the summer of 1840:—I had some spare melon plants of both sorts, that is, both from seed and cuttings, which I put into a frame. in which were a miscellaneous collection of cuttings, chiefly from stove I put the seedlings under one light, and the cuttings under the other two, in each of the hills: all went on apparently well, and the cuttings got rooted and removed, except a few fresh ones, which I had from a triend, consisting of Daturas, Thunbergias, Erythrynas, &c., which were put along the front of the frame. In this state they remained until the melons came into flower, and from that time until the fruit was fairly set; those, however, raised from cuttings were nearly all set before the others came into bloom. The atmosphere was kept considerably dryer until the fruit was as large as walnuts; but during this time the red spider made its appearance upon the Datura arborea in hundreds, and speedily passed from them to the melon plants, and had made considerable progress in establishing themselves before I observed them. I, however, immediately applied a fumigation of tobacco and the spirits of camphor, mixing half an ounce of camphor with a quarter of a pound of tobacco; and this checked them so, that they seemed to be all gone for a time, but they made their appearance before the fruit got swelled off. I was then advised, by a neighbouring gardener, to syringe them with water. strongly impregnated with sulphur: but the means used to expel the spider destroyed nearly all the foliage on the plants, so that the cure proved worse than the disease. Those of my plants raised from seed did not swell off their fruit, and were, besides, destitute of flavour. Those raised from cuttings lost a few of their leaves. The fruit, however, swelled, and a few leaves died, but comparatively few, and the fruit was highly flavoured, and bore a second crop; while those raised from seeds never recovered the loss of their leaves, which, I presume, will show that the seedlings are less hardy and less produc-

tive than those raised from cuttings: but it is not on this account that I prefer plants raised from cuttings; they are much more prolific, and show their fruit with less vine, so that there is not often good cause for the general complaint that the vines have run all over the bed without showing fruit. When cuttings are used, they should be taken from the extremities of the strongest vines, close below the third joint, and inserted in 32-sized pots, in rich soil, rendered porous with leaf mould, and plunged to the rim in a brisk bottom heat, paying attention to shading until the cuttings take root, which will be in ten days or a fortnight, and in six days more they will be in a fit state to plant into the hills for fruiting. The same treatment is perfectly applicable to cucumbers, as far as regards propagating them from slips; but the soil that I would recommend for the melon, should consist of nothing more than the top sward of a pasture, that had lain in grass for ten or twenty years, taking only the turf, 4 inches thick, from off a strong hazelly loam, where sheep have been kept: this should be chopped small, and frequently turned over for twelve months before using; and before putting any soil into the bed or pit, I would have the surface of the dung entirely covered with fresh turf, the grassy side undermost, which will answer two good purposes; namely, as a preventive against rank steam, and the roots of the melons from extending to the dung. The depth of soil I would recommend to be one foot, whether grown in flued or hot-water pits, or in common dung hot-beds. Such were the simple constructions used by our forefathers, who, nevertheless, had abundant crops of fruit, and attained as high perfection as any in modern times; but, notwithstanding, I have no hesitation in stating that pits, heated by hot water pipes, are of more utility for the growing of melons and cucumbers; and if I might give my humble opinion against the declaration of the learned Dr. Lindley, who states there can be scarcely anything more unphilosophical than Mr. Penn's method of producing a circulation of air within hot-houses, which he compares to a person lighting the streets, by putting the lamps within the dwelling-houses. At all events, I, for one, differ materially from him on that point, for I consider the period is not far distant when every hot-house will be constructed and heated on some modification of Mr. Penn's method. The construction that I would prefer for producing an artificial climate, would be similar to fig. 5, page 174; and I would have a water-tight gutter all the length of the pit, right below the return pipe, so that, by pouring water down at e, it could be covered with a thin sheet of water, so that a dry or moist atmosphere could be obtained at pleasure. This is indispensable to the proper culture of the melon; and by growing melons from cuttings, in a pit of that construction, four crops might be obtained in one season without any difficulty; and this is not practicable by the

old method of growing the plants from seed. It is not necessary to stop plants raised from cuttings more than once previous to their showing their fruit; at which time, any sudden change of atmosphere must be carefully guarded against; and also, while they are in flower they must not be watered over head; in place of which, they must be slightly steamed to nourish the leaves, and if grown in dung hot-beds. they ought never to be watered over head; and also every female blossom ought to be carefully impregnated; but as soon as all the fruit is fairly set, and they have commenced swelling, they may then be more freely supplied with water, which should be heated to the temperature of the pit, say from 75 to 80 degrees, at this period of their growth, and while they are setting; and as soon as they attain the size of an orange, by giving them a little pigeou or sheep dung water, it will greatly add to the rapidity of their swelling; always allowing an abundant supply of air, at all times and stages of their growth, when the weather will permit; and if any error is committed on this point, it had better be on the side of too much than too little air, both for the welfare of the plants and the flavour of the fruit; guarding especially against sharp cutting winds, which are frequent in the early part of the season. Hanging a slip of bass mat, from the end of the sash, down over the opening, so that the wind may be broken and softened before entering into the frame, is an excellent plan, but always giving so much air, that the temperature may never rise more than six or eight degrees above their respective standards, by the effects of sunshine, otherwise the plants will grow too weak and unfruitful. If melon plants are not short and strong, they never fruit well; and as the fruit draws towards ripening, water must be withheld. only giving as much as merely to keep the plants in life, and admitting a free circulation of air, allowing the thermometer to rise to 80 degrees at night and 85 degrees by day, to ripen their fruit; and as the fruit gets on the point of ripening, thin off any leaves that may be shading them from the sun, so that the sun's rays may have as much influence upon them as possible, and also that the air may get access to them, which will greatly strengthen their flavour; but, nevertheless, it requires caution and judgment, for, if overdone, it will be similar to my friend's cure for the spider.

ON THE CULTIVATION OF SHALLOTS.

BY T. S.

Not having seen any remarks on the cultivation of the Shallot in your miscellany, and having been very successful in the cultivation of the same, I beg to hand you my mode of treating that very useful bulb. The soil in which they are grown is of a light gravelly nature,

made rich by thoroughly decomposed stable manure, taken from an old cucumber bed. I have generally found them to succeed best upon a border with a west aspect. Early in September the ground is dug over, a good spade deep-then about the middle of October I prepare for planting, by forking it over with a three-pronged fork, after which I draw my drills full five inches deep, and the breadth of the hoe, and the drills eighteen inches apart; the drills are then filled with decayed tree leaves, to which saltpetre has been added at the rate of 1 lb. to a good barrow load of leaves, and well mixed together; the soil is then drawn over the drills, and gently trod down; the cloves are then planted, being merely thrust in with the fingers and thumb, just leaving the top of each clove visible (always selecting those that are larger and with the best shoulders, as they always break best) when the ground is raked lightly over, and the planting is complete; they now require no more attention than merely keeping clear of weeds, and hoeing and raking the surface occasionally, till they are ready for taking up, which is known by the tops turning yellow, and falling; by this method I have grown Shallots for the last seven years, very superior both in size and quantity. After they are taken up I generally lay them on the surface of the ground for a month to harden, when they are removed to a dry airy room and hung up in small bundles, where they keep admirably. I find October planting superior, decidedly, to February or March. I have also seen the above mode practised in a gentleman's garden where the soil is very strong, and it has given great satisfaction.

Vale of Mowbray, North Yorkshire.

REMARKS ON BLIGHT, ITS CAUSE, EFFECTS, AND PREVENTATIVES.

BY A PRACTICAL GARDENER.

Blight will soon make its appearance in our gardens, and by affecting many of our choice trees and shrubs, will cause the gardener no small degree of trouble. Although it attacks plants in many different ways, and at different seasons, this disease is generally thought to have the same origin; but there are two species to which I would direct attention in the present instance, as the season is approaching in which they usually appear. First, that which is brought on by unseasonably mild weather early in spring, which causes leaves and blossoms to be prematurely brought forth. Although this may be riewed with rapture by many, the gardener ought to look on it with suspicion and fear, as it frequently happens that these early blossoms and shoots are blighted by frost, which not only causes them to

wither and die, but materially injures, if not entirely destroys the Secondly, cold easterly winds in spring, which nip and destroy the tender leaves and shoots, thus stopping the juices and causing the leaves which are deprived of their nourishment to wither and die, whilst the sap which is stopped bursts the vessels and becomes the food of aphides; the rapid multiplication of these insects is well known, and they, doubtless, contribute to the spreading of the disease. This causes many persons to suppose that this species of blight is wasted on the wind; indeed it was considered by the Ancients as a blast, indicative of the wrath of some offended deity, and by them thought impossible to be prevented or cured. Gardeners, in their attempts to prevent, more frequently increase the first mentioned species of this disease, by closely covering up trees in spring, and allowing them to remain so during the day, thus partially blanching the shoots, and rendering them so tender, that when the cover is removed they are blighted by the slightest frost; therefore, in every case where covering is applied, it should be so arranged that it may be removed or drawn up, or on one side, whenever the sun shines or the weather is sufficiently mild to allow it, and, by these means, preventing the shoots from becoming unnaturally tender. regard to the second species mentioned, gardeners are sadly inattentive to the effects of cold easterly winds in spring. They ought whenever it is possible, to prepare some means, however slight, of protecting them, for they, undoubtedly, cause more plants to be affected by blight than any other cause. Whenever blight makes its appearance it should be attended to immediately, carefully picking off the diseased leaves, and cutting off the affected parts of the shoots afterwards, carefully and frequently washing them with clean water so long as any glutinous matter appears, which will check the insects without the aid of tobacco or other application, and will be an effectual remedy if attended to in time. Partially shading from the midday sun will also be found beneficial to such plants as have been seriously affected.

MESEMBRYANTHEMUMS AS AN ORNAMENT FOR THE FLOWER GARDEN IN SUMMER.

BY AN AMATEUR.

The profusion of blossoms which this extensive family of plants produce, and the neatness of their growth, ought to render them greater favourites than they seem to be at present, especially as summer ornaments to our flower gardens. I am of opinion that they are much hardier than is generally supposed; and although from

their succulent nature it is evident they will not stand frost, yet they may with success be planted out in the open air much sooner than they usually are. Mesembryanthemums that are intended for planting out in the flower garden, should be re-potted in March, in soil composed of fresh loam and peat in equal quantities, with a sufficient portion of sand to prevent it from becoming coagulated. When they are potted, the soil should not be pressed very tight, and sufficient space should be left for half an inch of fine gravel to be placed on the top (from which all the sand has been thoroughly washed,) this will keep the surface of the soil from becoming hard, and also keep it moist; for although these plants are impatient of wet, yet nothing is more detrimental to their vigorous growth than drought. After they are potted they should be placed in a frame, and kept close and moderately warm till they have taken fresh root, when they should be gradually hardened that they may be ready to turn out not later than the end of April. In placing them in the open air, it is not essential that they be turned out of their pots; but if they are, the balls should by no means be broken. After they are turned out, they ought to have a slight frame work or hoops placed over them, in order that they may be carefully protected from cold winds and heavy rain for some time, and especially at night. Thus treated they will amply repay the trouble that has been taken with them, by producing a constant succession of their splendid blossoms till the frosts in autumn stop vegetation.

REFERENCE TO PLATE LX.

NEPENTHES. New Species.

NAT. ORD. NEPENTHEACER. CLASS DIŒCIA MONODELPHIA.

The structure of this genus, notwithstanding their infinite variety of vegetable forms, is, so far as we are aware, unequalled by any other, in the remarkable formation of the pouch or pitcher suspended from the extremity of each leaf. This most singular appendage has an office to fulfil in the economy of the plant; thus much we can state with certainty, because we believe nothing has been made in vain, but what this office really is has not yet been by any means clearly defined or explained by those who have speculated on the subject. There is in the pitcher, even previous to the lid opening, a limpid secretion, having a sweet taste; and immediately on the pitcher arriving at maturity, the lid opens, when innumerable winged insects are speedily entrapped within it, being, as it would seem, enticed to enter from the sweetness of the liquid which it contains. Any addition, therefore, to this genus will, we conceive, be welcomed by those who are at all concerned in the possession or culture of such vegetable objects. The one of which our plate is a representation, was lately imported by Messrs. Loddiges, of Hackney; and, although as they advance in growth, (there are



ilery of Celleven three or four imported plants,) they approach nearer in habit and character to the N. distillatoria; there are obvious and distinct characters altogether different from that species. The plants were received without names, and we deem it better not to incumber the species with any other appellation than "Loddiges' new Pitcher Plant." It may be identical with some dried specimens in the possession of Mr. Lambert, of which we have heard; but have had no opportunity of inspecting them.

These curious plants had well nigh been lost to the establishment in question, and to the country. During the last autumn they were removed into a newly glazed and painted glass case, by which the foliage was greatly injured. The peculiar habit of the genus required precaution, being exceedingly susceptible of injury from the slightest touch of the hand, a circumstance worth remembering by those who have the care and cultivation of this genus intrusted to them. It may be regarded as an unalterable fact, that no pitcher plant will long remain in an healthy state, if the foliage be allowed to be frequently handled. The Nepenthes distillatoria, or common Pitcher Plant, when cultivated in perfection, succeeds best in moss chopped rather fine, mixed with white sand and a little peat; and it will be found of great assistance in promoting the vigour of the plant, if a little additional moss be added to the surface from time to time, as the plant advances. The roots of the Nepenthes, we have found never run deep, whatever the compost may be in which they are planted, but invariably spread themselves over and about the surface of the moss. They require to be kept moist, but, unless when the plants are growing very vigorously indeed, we have never found that setting them in feeders of water, was otherwise than injurious to them. In conversation with Mr. M'Nab, the Curator of the Edinburgh Botanic Garden, respecting this plant, he stated an instance which shows that it is far from tender, namely, that in the Edinburgh Garden, a plant was exposed to 8 degrees of frost, it was afterwards removed to the stove, without suffering any injury from the frost to which it had been exposed.

It usually succeeds best when kept in a heat ranging from 60 to 80 degrees of Fahrenheit. It is not difficult of increase: which will not be doubted when we mention the fact that we succeeded in rooting and establishing a single cutting, sent to us a distance of upwards of 200 mlles.

NOTICES OF NEW PLANTS.

ENOTHERA FRUTICOSA, VAR. INDICA. Indian Enothera. | Bot. Reg.

A very pretty variety, well worthy a place in every collection of herbaceous plants. It is quite hardy, growing and flowering freely in any common garden soil, and is easily increased by division.

ISMENE VIRESCENS. Stalk-flowered Ismene.

Bot. Reg.

NAT. ORD. AMARILLIDACEÆ. CLASS HEXANDRIA MONOGYNIA.

A Pancratium-like plant, with greenish white flowers, which have an agreeable lemon like fragrance,

SOLANUM MACRANTHERUM. Large Anthered Bitter-sweet. [Bot. Reg.

NAT. ORD. SOLANACEÆ. CLASS PENTANDRIA MONOGYNIA.

This is a half shrabby species of easy cultivation and vigorous growth, scrambling up anything that may be near it, in the same way as the English bitter-sweet, and producing a profusion of large clusters of deep purple flowers, whose centre is occupied by a large knot of large bright yellow anthers. It was raised from Mexican seeds by Mr. Page, of Southampton; has hitherto been treated as a greenhouse plant, and is well worthy of a place in every collection.

BRACHYCOME IBERIDIFOLIA. Large Swan Daisy.

Bot. Reg.

NAT. ORD. ASTERACE#, OR COMPOSITE#. CLASS SYNGENESIA POLYGAMIA SUPERFLUA.

One of the most desirable dwarf hardy annuals in cultivation, in every respect equal to Nemophila insignis. It produces abundance of large daisy-like violet-coloured flowers, varying in the depth of colour according to their age. It flowers freely in the open border, but it is impatient of wet.

SOWERBÆA LAXIFLORA. Loose-flowered Sowerbæa.

Bot. Reg.

NAT. ORD. LILIACÆA. CLASS TRIANDRIA MONOGYNIA,

A greenhouse herbaceous plant from Swan River, very much like the old Sowerbæa juncea, differing from it, however, in having paler and smaller flowers, with triangular, not tapering, leaves.

CYRTOPODIUM ANDERSONII. Anderson's Curve-foot. | Bot. Reg.

NAT. ORD. ORCHIDACE & VANDE . CLASS GYNANDRIA MONANDRIA.

A plant which has long been known, and which is comparatively of easy culture, thriving in well drained turf, with the same treatment as the Catasetums. "It is found wild in the tropical parts of America, where from the fleshy stems the shoemakers obtain a kind of paste or glue, which they use for the purpose of their art."

HIBISCUS CAMERONII. Mr. Cameron's Hibiscus.

Paxton's Mag-

NAT. ORD. MALVACE. CLASS MONADELPHIA POLYANDRIA.

A magnificent species raised from seeds (collected by the Missionaries in Madagascar), by Mr Cameron, of Birmingham Botanic Garden, and named to commemorate him. The flowers are large and solitary, with ovate obtuse petals, having a wavy margin of a dull buff colour, tinged with rose, and conspicuously veined, the claws of a bright buff, surrounded with a rich and beautifully rayed deep marone colour. "It is a profuse bloomer, of a dwarf habit, and not by any means tender."

HUNTLEYA VIOLACEA. Violet-flowered Huntleya.

Parton's Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A very beautiful orchidaceous plant, which is at present very scarce in England. It is destitute of pseudo-bulbs, its leaves are erect, acute, and slightly plaited; the flowers, which it produces several times a year, are solitary, large, and of a beautiful bluish purple, or violet, lasting for several weeks. It was descovered by Mr. Schomburgk on the banks of the River Essequibo, in British Guiana, but always in the vicinity of cataracts, and growing on the branches of large trees, which spread their shade over it. From these circumstances, we

must conclude that a humid and partly obscured atmosphere is of the greatest importance to its cultivation. Mr. Paxton observes "From the exceedingly singular character of the flowers, their peculiar and uncommon colour, and the liberality in which they are borne, this handsome orchidaceous plant is entitled to very high consideration among the admirers of the tribe." We have lately seen it in bloom at Messrs. Loddiges, of Hackney, and the general aspect of the solitary flower, forces upon the mind its striking resemblance to some of those hideously grotesque figures of the human face, occasionally exhibited as the deities of heathen nations.

MUSA SUPERBA. Superb Plantain Tree.

Bot. Mag

NAT. ORD. MUSACEE. CLASS POLYGAMIA MONŒCIA.

This beautiful species has flowered in the Botanic Garden of Edinburgh, and although it does not produce eatable fruit, it must be a great ornament to our stoves. It appears that the specimen figured was not more than five feet high, though remarkably vigorous; the leaves are five feet long, by one foot seven inches broad, of a lively green, and with a narrow red edge.- "Floral leaves gradually smaller till the petioles pass into large ovate bracts, the lower of which only obtain a small portion of the leafy expansion at the apex; but these like the others, spread in a roseate manner, green without, red brown within, forming after a few only have expanded, a large, elegant, cernuous imbricated circular basin, of a foot in diameter, in the centre of which is the cordato ovate mass of unexpanded bracts, surrounded by the flowers, which are half concealed among the imbricated expanded bractea." Dr Graham, who has described this plant, appears to doubt the accuracy of Roxburgh's description to which he refers. He says the size and form of the stem does not accord with his plant, and proceeds to observe, "His plant is described as thirteen feet high, ours, though remarkably vigorous, is only five; his has a most remarkable conical base, seven and a half feet in circumference, close to the ground, and scarcely taper at all." In some respects, however, Roxburgh's description of the stem, especially its conical form, is admirably descriptive of a plant which was raised and cultivated for some time in the late large domical conservatory at Bretton Hall. The seeds were transmitted to Mrs. Beaumont, by Dr. Wallach, of Calcutta. One plant attained the height of about six feet; the upper part of the short conical stem where the leaves parted, was remarkably contracted, while the base was four or five times the diameter of the upper part. Owing to this remarkable peculiarity of the species, the plant was lost, having been accidentally, but carelessly, shifted from one part of the stove to another, by workmen employed in effecting some alterations in the house. The plant was broken at the contracted part of the stem, and ultimately died.

TROPÆOLUM BRACHYCERAS. Short-spurred Indian Cress. [Bot. Mag.

NAT. ORD. TROPÆOLEÆ. CLASS OCTANDRIA MONOGYNIA.

A plant which is now pretty generally known, being of easy cultivation. "It is scandent, and if allowed to grow in a compact manner, around some sticks stuck in the pot, its copious bright yellow flowers are well relieved by the delicate green of the foliage, and the effect is exceedingly pretty."

ACONITUM CHINENSE. Chinese Monk's hood.

Bot. Mag.

NAT. ORD. RANUNCULACEÆ. CLASS POLYANDRIA PENTAGYNIA.

A hardy species, producing large, deep, and vivid purple blossoms. It is a stately plant, and supposed to be a native of China. SOLANUM JASMINOIDES. Jasmine-like Nightshade.

[Paxton's Mag.

NAT. ORD. SOLANACEÆ. CLASS PENTANDRIA MONOGYNIA.

A very desirable species, with Jasmine-like leaves, and producing copious clusters of delicate pale blue flowers, which are exceedingly fragrant. It is evergreen, and of a climbing habit, grows freely in a compost composed of loam, with a little peat and sand, and does not require a large pot. It has flowered freely, both in the greenhouse and in the open air, but as it flowers during the autumn and winter months, very freely in the former, that will be the most desirable situation for it.

SPIRÆA KAMTCHATICA VAR. HIMALENSIS. Himalayan form of the Kamtchatha Meadow-sweet. [Bot. Reg.

NAT. ORD. ROSACEÆ. CLASS ICOSANDRIA PENTAGYNIA.

A hardy perennial, very nearly allied to S. ulmaria, and requiring no more care than it; however it flowers best when planted in a damp situation, and partially screened from the sun.

ONCIDIUM MACRANTHERUM, Large Anthered Oncidium. [Bot. Mag. NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

A species ranking near O. pumilum, with flowers, the sepals and petals of which are yellow green, tinged with red, and the lip lemon coloured, blotched with pale purple.

ONCIDIUM WRAYE, Mrs. Wray's Oncidium.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A native of Mexice, and introduced to our gardens by Mr. Wray, of Cheltenham. Its pseudo bulbs are ovate, furrowed, wrinkled, and compressed, the scape arises from the base of the bulb; it is slender, and from three to five feet high, channelled above, and bearing copious bright yellow flowers, the sepals and petals alone blotched with deep rusty-brown.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

ODONTOGLOSSUM STELLATUM.

A new species, imported by the Horticultural Society from Mexico. It is similar to O. rossii, differing from it in the sepals and petals being equally herbaceous and narrow, of a dull olive green, faintly spotted with purple, and the lip pure white.

DENDROBIUM CALAMIFORME.

A pretty and graceful epiphyte, from New Holland, imported by Messrs. Loddiges. The flowers are a light yellow, with the base stained with purple; the labellum is purple, beautifully crisped and spotted towards the upper end.

EPIDENDRUM VIVIPARUM.

A native of Guayana, with white scentless flowers, closely arranged at the end of the flower stem, which is two feet long. Dr. Lindley observes, "The latter (flower stem) when old, produces young plants at almost every joint; a curious habit, which proves that the leaves of plants in whatever form they may be, whether true leaves, scales of the stem, bracts, or otherwise, have a bud either latent or manifest in their axil, which buds are capable of being stimulated into growth under circumstances which vary in different species."

MAXILLARIA BROCKLEHURSTIANA.

A charming plant, producing a scape a foot and a half high, terminated by several rich crimson brown-spotted flowers, more than two inches in diameter, and deliciously sweet. It was imported from Rio Janerio. by T. Brocklehurst, Esq., of the Fence, near Macclesfield, and is one of the finest species of the genus-

RIVEA TILIÆFOLIA.

The Convolvulus tiliæfolius of some Botanists, and the Ipomæa tiliæfolia of others. It is a large half shrubby climber, and, perhaps, of too great growth for trellis cultivation; but where there is plenty of room for it to spread, it will, undoubtedly, prove highly ornamental. It has leaves much like those of the Lime tree in form, but thinner; the flowers are very large light purple, and single in the axils of the leaves.

ACACIA BIFLORA.

From Swan River; it is a pretty greenhouse shrub, with small axillary heads of yellow flowers, smelling like Hawthorn. It is in the possession of Messrs-Lowe and Co.

STANHOPEA AUREA.

Of this fine plant Dr. Lindley observes, "Imagine a plant whose flowers have the size of S. insignis, the form of S. venusta, the smell of S. oculata, the colour of Maxillaria aromatica, and arranged in a spike two feet long, and the reader will have a tolerably distinct conception of this beautiful thing, which Messrs Loddiges received from Mr. Batiman, who obtained it from Guatemala. It has the two dark spots of Stanhopea oculata, but they are in some manner lost in the flood of yellow that surrounds them."

VANDA VIOLACEA.

A pretty species, from Manilla, with short racemes of rather large flowers, of a white ground, spotted with light violet and a violet lip.

BEGONIA PUNCTATA.

A native of Mexico. Its leaves are obliquely heart-shaped, with deeply cut lobes, green above and below, and slightly tinged with red on the margin; the flowers are rose-coloured, with scarlet dots at the base of the petals.

ASTEROTRICHION SIDIOIDES.

The Plagianthus sidioides of Sir W. Hooker; a plant of no great beauty.

ACANTHOSTACHYS STROBILACEA.

A Bromeliaceous plant, from Brazil, with long acute spiny leaves, recurved, fleshy bright red bracts, and bright sulphur-coloured flowers.

MARIANTHUS CŒRULEA PUNCTATUS.

A pretty plant, from Van Dieman's Land, producing corymbs of pale violet flowers, with deep blue dots and blue anthers.

SALVIA TUBIFERA.

One of the best Salvias that has been introduced. It grows about three feet high, with ovate long stalked leaves, and long racemes of purple flowers, drooping gracefully from the end of the branches. It is from Mexico, and has hitherto been treated as a greenhouse plant, but will probably prove as hardy as the other Salvias.

SPIRANTHES LINDLEYANA.

A variety of S. elata, with the leaves spotted with light glaucous green.

SISYRINCHIUM MAJALE.

A perennial greenhouse plant, from Valparaiso, with a simple forked stem, from one to one and a half feet high, surmounted by six or eight yellow flowers, which develope themselves in succession.

BURLINGTONIA RIGIDA.

A beautiful species, inhabiting the woods of Brazil, and of a very singular habit, "It first forms a tuft of two or three leaves of a ovate lanceolate form and rigid texture, whose petiole is then folded together in an equitant manner, and articulated with the lamina. Subsequently, in the middle of those leaves, appears a short branch in the form of a pseudo bulb, oval, thin, and furrowed, on whose apex arise one or two leaves like the first in form, but without the equitant petiole. The plant having advanced to this point, and succeeded in establishing itself on the branches of a tree, by means of numerous fine, rather stiff roots, it next produces from the axil of one of the lower leaves a rigid stem, slender, and as thick as a crow quill, which rises erect into the air, forming two or three membranous sheaths upon its surface, and ceasing to grow as soon as it has acquired the length of eight or ten inches. At its apex it developes just such a tuft of leaves as that from which it sprang, and thus continues. At the time of flowering, it emits from the axils of one of its leaves a flowering stem, six or eight inches long, and bearing at the apex a very short umbel-like raceme of several large drooping flowers, delicately tinged with pink." It has flowered in the collection of Messrs. Loddiges, but no scent was perceived in it, although it is said to have that of violets when in its native state.

MISCELLANIES.

"Absolute rest in winter is essential to this genus (Ismene,) which delights in very light sandy soil; its cultivation is easy when these two requisites are observed. Amancaes seems to thrive best in pure white sand, at least in the vicinity of the bulb. I have flowered it in the open ground by putting a pot full of white sand with the bulbs into the border. Calathina is less particular as to soil, and pedunculata is hardier than either, vegetates in a lower temperature, and flags sooner in hot weather. They should be planted in a border of light compost in April, and the bulbs must be taken up, when the leaf is cut by frost, in November, or sooner, without breaking off the thick fleshy fibres, which will endure through the winter after the bulbs are taken up. They must be put in a box or large pot, and covered with dry sand or earth, and kept quite dry till the following April or May. If amancaes be set in the stove at the beginning of May and watered, it will flower immediately, and it should be removed into a greenhouse as soon as the first bud is ready to expand. The sulphur coloured mule may be forced as easily. It is a beautiful plant, and has produced flowers, in which the expansion of the cup was three and a half inches, and the limb five and a half. Its ovulas, three in a cell, are bold, and its pollen seems fertile. The seed of Ismene is large and round, and vegetates immediately in a remarkable manner, forming a bulb as big as itself, (sometimes much bigger,) far underground, without pushing any leaf. As soon as the seed rots, the young

bulb must be left without water till the next spring. A person unaware of the peculiarity of this genus, when he found the seed rotten, would be likely to throw away the earth, without suspecting the formation of the bulb near the bottom of the pot. If the seedlings of amancaes are grown in loam, I believe they will be twenty years before they attain size to flower; in pure white sand, or a very sandy compost, I think they may flower the third year. I have a mule seedling from amancaes, from seed of last year, which is now near two feet high, with five leaves. The seedling bulbs raised this year from the mule are larger than the natural amancaes, from seed that was sown at the same time."

—Mr. Herbert in Botanical Register for February.

A person decides upon planting a certain space of ground, and, perhaps, is at the expence of having it trenched and prepared; however, be this as it may, the planting being decided upon, instead of considering the kind of tree the soil and situation is best calculated to grow to perfection, the requisite number of plants (what is termed a regular mixture) is obtained and planted forthwith. This indiscriminate planting is undoubtedly a certain means of obtaining a crop of trees of one kind or other, yet how often in after years is it the source of disappointment and vexation; for instead of, perhaps, one hundred oaks, which the ground may be calculated to grow, only two or three are alive, and even these are overtopped by the more common kinds, or such as are of very little value. This evil may be avoided by abandoning this random method of planting, and as the nature of soils is now tolerably well understood, it will be no difficult matter to ascertain whether the Oak, Ash, or whatever is most likely to succeed in such particular situation. By planting the sort or sorts chosen in distinct masses, a full crop may be insured in these masses, by nursing them for a time with kinds more hardy and of more rapid growth .- A Planter.

To obtain long and clean Carrots where the ground is not suitable to their growth, I have adopted the following method, with success:—Open a trench, across the ground, similar to what is usually made before digging, into which, put short rotton dung, and raise the earth over it in a ridge a foot or more high then, with a spade, make a slit along to top of the ridge, the full depth of the spade, and fill this slit up with well decomposed leaf mould, or any light vegetable mould, and on this sow the seed. I have commonly found the produce of two of these ridges equal to four or five drills sown in the usual way, on the same piece of ground.—G. G. Sussex.

I have read with interest the remarks of a Gardener on the Maggot in the Onion, but I still fancy that the young onion is in a diseased state before the fly blows it, from something being wrong in the soil or manure, which might be counteracted by some chemical agency, as I have proved in scores of instances, and in nearly all kinds of soils, by using saltpetre as described by me in vol. 2, page 102, of this Magazine, and always with the best possible result—5. T.

Brachycome iberidifolia flowers freely in the open border, but is impatient of wet; at the latter end of the season it may be lifted, and being carefully potted, may be placed in the greenhouse, where it will continue to bloom beautifully. There are many varieties of it, differing in colour and size, particularly a lilac and white, and in these the flowers differ much according to their age; but there are varieties of it of every shade of blue and lustrous lilac, with considerable diversity in the shape and size of the flower heads.

SIR,—I shall feel much obliged to your correspondent T. S., if he will inform me, through your valuable Magazine, how he manages to keep his Guillardia Picta through the winter, as I am always compelled to put mine under protection in the winter. How T. S. makes it hardy, I cannot make out, it is something new to me, and what I shall be glad to be made acquainted with, and so I think will many more of your readers. I shall be glad if you or any of your numerous readers will give me the best method of growing the beautiful tribe, Gloxinias, so that they will be large and fit for exhibition; also, a list of the best sorts known in the trade, with colour and habit, &c.

A. Parsons.

Sir,—I beg to make a few observations in your valuable Magazine for March, which I hope you will take in just the same good spirit as I am writing, for I can assure you I do it with the best of feeling towards you, and for the interest of your readers. I consider the botanical description you gave of the plates an error. We have first, Lobelia unidentata. You say it belongs to the natural order Campanulaceæ, class Pentandria Monogynia. Now I find by looking over Loudon's Hortus Britannicus that Lobeliaceæ is a distinct natural order of itself; and Campanulaceæ is also a distinct order. Then you have got Dianthus gaulthaesi, natural order Silenaceæ, class Polyandria Digynia, this I also find belongs to the natural order Caryophylleæ, tribe I a c Silenaceæ, class Decandria Digynia, and not Polyandria Digynia. So you will see that either Mr. Loudon or yourself is wrong, and as I think this likely to deceive some of your readers, I think it a sufficient reason for some one to point it out. Wishing the work a good circulation.

Enfield, Middlesex, Feb. 15, 1841.

A. PARSONS.

[We are much obliged to our correspondent for his criticism, and he will see that we have given it exactly as it was sent us, which, we hope, will be some guarantee that we have no wish to deceive.

Were we to apologize for the errors with which we are charged, it might be pleaded, first, that we admit Mr. Loudon to be a great authority, but there are others who are also thought great authorities, and what is worse, these great authorities do not always arrive at the same conclusion. Our correspondent will find the confirmation of this fact, first, by referring to R. Brown's prod. p. 562, where he will perceive the genus Lobelia, included in the nat. ord. Campanulaceæ. He will also find by referring, say to Miller's Gardener's Dictionary, by G. Don, that even the authority of authorities, Juss. himself, included in his nat. ord. Lobeliacearum, the genus Campanulacem. So that in his time there was no need for a natural order Campanulaceæ. We mention this to show the effect of change. Again, what will our correspondent say if we bring the very authority which he has set up to give evidence against himself. Suppose he refers to Loudon's Enclycopædia, first edition, and turn to the genus Lobelia; if he should find there that the genus Lobelia is included in the nat. ord. Campanulaceæ, he will surely exonerate us, not only from an intention to deceive, but also from the error into which he had supposed us to have fallen.

With respect to the Dianthus, we have no doubt our correspondent will be satisfied when we refer him to a recent and excellent work "Paxton's Botanical Dictionary;" and if he will turn to the genus in question, he will find it included in the nat. ord. Silenaceæ, and under the class and order as published in our Magazine. If Mr. Paxton is not thought to be an authority, we can call upon Dr. Lindley to be responsible for the accuracy

of this work, for in the preface we find him admitting the following statement. Mr. Paxton says that "we rely greatly on our own rigid research in these matters, having been engaged in it for several years, but still more so on a careful revision of both MSS and printed proofs, undertaken by Dr. Lindley."

Our worthy correspondent, we hope, will perceive that the sum total of our error amounts to nothing more than having given preference to authorities, which he does not acknowledge. The strictures of our friend very forcibly suggest to our mind the enviable position in which the students of botany would be placed, were there, as our correspondent would have it, only one authority for all botanical matters. This will be the more obvious, if, for the sake of illustration, the mind can endeavour to grasp the almost endless catalogue of terms necessarily applied to the various parts of a plant. Suppose these at a very moderate calculation to be several hundreds, then if we take the botanists of acknowledged authority of the present day, and those of the last century (including foreigners) and multiply the one by the other, there will be a total, not much short of twenty thousand words or terms with which it is desirable the student should render his mind more or less familiar. Botanical terms, become thus numerous, from the circumstance that scarcely any two Botanists adopt the same terms for the same parts of a plant; and if a plant pass under the inspection and examination of half a dozen Botanists, it is very likely to have received as many names, and so in like manner with the names of natural orders; hence the supposed error into which our correspondent considered us to have fallen,-ED.]

MONTHLY CALENDAR.

N. B .- In this Calendar, the current volume only is referred to.

FLOWER GARDEN.—Digging and dressing flower beds and borders, and preparing beds for summer flowers, should not be delayed; and all kinds of herbaceous plants planted, 'removed, or divided, as early in the month as possible. Plant anemonies, if they have been delayed so long; plant ranunculusses (p. 206); attend to tulip beds (p. 123), and water them, if necessary (p. 180); top-dress auriculas, in pots, with good rich soil, and protect them from heavy rain; pot carnation layers towards the end of the month; pot alpine plants (p. 202), and sow all kinds of hardy annuals, if the weather permit; prepare lawns (p. 198); destroy moss on them (p. 37), and sweep and roll them, and grass and gravel walks, frequently in fine weather; prune roses, and destroy insects on them (p. 21); destroy slugs and snails (p. 213).

PLANT STOVE.—Increase the temperature slightly, and keep the atmosphere of the house rather moister. Remove dormant orchideæ to a higher temperature (p. 71); water carefully and sparingly yet, and give air whenever possible.

GREENHOUSE.—Make no fires, except the house is very damp, or there is danger of frost. Give all the air possible, whenever the weather permits, in order to check any tendency to growth, which close confinement may have caused. Prune and regulate creepers, before they begin to grow; repot clematis siebaldii

(p. 54), brugmansia aurea (p. 178); pot camelias that have done flowering (p. 39), and shade them (p. 41); attend to greenhouse plants in vineries (p. 31); pot tropcolums, amaryllises, and other bulbs, that have been kept dry; remove dead leaves, moss from the surface of pots, &c. (See Cal. for Dec.)

PARK AND PLANTATIONS.—Plant all kinds of deciduous trees, and sow all kinds of tree seeds; cut down trees intended for stools; cut copse wood; fell and thin trees, but defer meddling with the barking kinds, till they will peel. Vigorously prosecute all operations on ground, water, &c.

KITCHEN AND FRUIT GARDENS.—Complete all pruning and training as soon as possible; likewise planting all kinds of fruit trees and strawberries. Protect the roots of trees by mulching, and the branches of such as are coming into blossom, by netting or other means. Sow a general crop of onions, carrots, parsnips, beet, and other esculents,; towards the end of the month, sow savoys, Brussel sprouts, borecole, red and other cabbage, cauliflower, (Drumhead or Scotch cabbage for field culture, if required,) leeks, parsley, and other herbs; asparagus and sea kale may also be sown at the end of the month- Plant artichokes, shallots, and garlick, if not done; also sea kale, asparagus, potatoes, onions for scallions, and autumn-sown onions for large bulbs. Divide, plant, and propagate by slips all kinds of herbs, &c. Transplant cabbages, cauliflowers, and lettuce; and sow lettuce and small salad every fortnight; dig and remove weeds, decayed vegetables, and attend to neatness.

PINE STOVE.—This is the month in which pines are generally shifted. Take off suckers (p. 7); pot suckers, &c. (p. 8) for general management of pines, temperature, &c. (See pp. 7 and 35).

PEACH HOUSE, VINERY, AND FORCING DEPARTMENT .- Peaches must now have abundance of air, and be frequently syringed, to keep down the red spider. and fumigated, if there is the least appearance of aphis. For such as have stoned, or are getting a moderate size, a temperature of about 60 degrees with fire, and from 70 degrees with sun heat, may be kept; but if the trees are only in bloom, but little water must be used, and a temperature of about 55 degrees will be sufficient. This is generally supposed to be the best season to commence forcing vines; a temperature of 50 degrees will be sufficient to commence with, being attentive to keep the house near that degree till every bud has begun to spring. This is a point of great importance; for if too high a temperature be kept up at the beginning, it is a great chance if one half of the buds push at all; after the buds are all in a state of vegetation, the temperature may be increased to 60, 65. or even 70 degrees; but this must be gradual. Give air whenever an opportunity occurs, and keep the house moist. Set in strawberries in succession, giving them plenty of air and water. Sow kidney beans in succession. Prepare beds for melons and cucumbers, asparagus, sea kale, &c. Sow small salad; celery, on a slight hot-bed, and a little lettuce, to supply the place of what has been killed by the frost. Turn and prepare dung for linings and hot-beds; attend carefully to covering, &c. (See Cal. for Dec.)

In the flower forcing department, introduce all kinds of plants in succession. Sow tender annuals on a slight hot-bed, or in pans, or other thing; pick out such as are up, being careful not to water them too freely, or they will damp off. Put in dahlias, to obtain cuttings. Pot tuberoses, and place them in a moist heat; also gloxinias, gesnerias, amaryllias, and other bulbous plants. Put in cuttings of hydrangeas, pelargoniums for flowers in the autumn, &c.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LIX.—APRIL, 1841.

ON THE TULIP, ITS HISTORY, THE MODE OF HYBRIDIZING, CRITERION OF A GOOD FLOWER, &c.

(Continued.)

BY EDWARD A. LEATHAM.

History.—We read that the Tulip was introduced into Europe in the year 1559, from Cappadocia, that having been brought into England from Vienna, it was cultivated by James Garnet, in 1577, that its cultivation was at its greatest height in between 1634 and 1637, and that, ultimately, it became "a mere gambling business, and was rightly named Tulipomania," as the reader will judge when I present him with the following list of prices at which Tulips were sold:—

One hundred and twenty were sold by public auction for 90,000 guilders.*

Two, called Brabanters, sold for 3,800 guilders.

One root, the Semper Augustus, for 4,600 guilders, together with a new carriage, a pair of horses, and a complete set of harness, making a total of not much less than £600.

For another of the same name, twelve acres of good freehold land were given.

A root of the Viceroy obtained 4,203 guilders,

For another of the same, articles to the amount of 2,500 florins† were delivered.

In England, the taste for Tulips rose at the highest, according to Loudon, at the beginning of the last and end of the preceding century; since then it has greatly declined, though Tulips are still advertised at £50 the root.

Hybridizing.—Remove the anthers of the flower selected to stand for seed, and upon the style or round knob at the top of the pistel, transfuse abundantly the pollen of the flower selected for this purpose; when the stem withers, and the pericarpium opens, cut off the seed

^{*} A guilder is equivalent to 1s. 9d. English Money.

[†] A florin is equivalent to 2s. English Money.

pod, together with a few inches of the stem, by which hang it up in a dry place, where it may remain till the time has arrived for the sowing of the seed.

Criterion of a fine Tulip.—The stem strong, erect, elastic, not less than thirty inches high. ‡

The Corolla, consisting of six petals, all rounded evenly at the top, the three outer larger than the three inner, together forming an almost perfect cup, rather smaller at the bottom than at the top. The stripes, &c., should be bold and regular, delicately pencilled and abrupt by breaking a clear white or yellow ground.

The leaves strong and healthy.

The root firm and large, the upper end pointed.

Conclusion.—Thus having described the planting, protection, taking up of bulbs, propagation by seeds and offsets, breaking, varieties, diseases, forcing, history, hybridizing, and criterion of a fine flower, stem, leaves and root of the Tulip, I shall now conclude my papers with the following verse by Montgomery, admirably adapted to this beautiful flower:—

"Not one of Flora's brilliant race,
A form more perfect can display;
Art could not feign more simple grace,
Nor nature take a line away."

- On this subject we make the following observations from Gerarde, who wrote his Herbalabout 1599, where he enumerates and describes somewhat minutely fourteen kinds, and then has the following quaint remarks with respect to varieties. "Notwithstanding my loving friend Master James Garret, a curious searcher after simples, and learned Apothecarie in London, hath undertaken to find out, if it were possible, the infinite sorts by diligent sowing of their seeds, and by planting those of his own propagation and others received from his friends beyond the seas for the space of twenty years, not being yet able to attain to the end of his travel, for that each new year brought forth new plants of sundry colours not before seen, all which to describe particularly were to " Roule Sisiphus Stone," or number the sands. And he further adds, "They have no smell at all which can be perceived the roots of these are likewise bulbed or onion fashion, every of the which severally to set forth, would trouble the writer and weary the reader " From various circumstances that have come under our own observation, we are led to believe that the taste for the cultivation of this very beautiful flower is reviving. Fugitive as are its gay colours, they are exceedingly captivating, and when well grown, and the bloom in high perfection, they must be admired.-ED.J
- † As the height of the stem, as we read it, is somewhat greater than Tulips usually attain, if we have misunderstood our Correspondent we shall be glad to be set right.—ED.]

ON THE EVILS OF DEEP PLANTING.

BY T. MOORE.

There are few evils of more common occurrence, or which are productive of more injurious effects, than that of deep planting; whether we consider it with reference to fruit bearing or ornamental trees and shrubs. In the instance of the former of these, luxuriant, but fruitless branches, ending in canker and decay, are most commonly the result; and in that of the latter, if they are planted so that the ramification of the principal roots from the stem, may not in a few years become visible, not only is much of their beauty and picturesque effect lost in consequence of their common place appearance, which in that case would be that of branches lopped off and stuck into the soil, but also their natural habits are reversed, so much so, that each individual so planted, instead of being a faithful picture of nature, as we ought to look on all trees planted for ornamental purposes as designed to be, it has absolutely nothing to recommend it, but its fictiously assumed character of rapid and overbearing growth. Freedom and rapidity of growth may be desirable objects, and it may be worthy of some pains-taking to insure them, when trees are planted for the purpose of hiding disagreeable objects, or to produce shelter; but when planted solely with a view to their effect as ornamental objects, or to their produce as fruit-bearing trees, luxuriance in these cases becomes an evil, which it should be the diligent care of every cultivator to repress.

There is in plants (comprehending in this term the whole vegetable kingdom) a certain point called the neck or collar, where the vital principle is more especially seated than in any other part. plants raised from seeds, this vital point is situated exactly below, where the plumula or ascending shoot springs from the axes of the cotyledons or seed lobes; and in plants originated by other means, such as by the process of layering or by cuttings, the analogous point is found just above, where their roots ramify from their stems. If, during their infant state, plants are cut through at this part, the roots will infallibly die; but in some cases, after the plants have advanced to a certain age, their roots become furnished with adventitious buds, and these will produce young shoots, even though the original plant be cut over at the neck. From some innate principle intimately connected with the vitality of plants, but which no theory has ever physiologically or satisfactorily explained; it has been ascertained that the effects which are produced by covering this point too deeply with soil, are those I mentioned above, namely, luxuriant and unripened growth during summer; the consequences which attend this

immaturity of the branches are, that they are exposed to serious injuries from inclement weather, the ravages of insects, and other causes, which most generally end in canker or some similar disease productive of decay.

Whilst theory can offer no satisfactory explanation why these effects should be produced simply by immuring the collar below the surface of the soil, practice and experience have fully proved that they are so produced; and as a general principle, it may be assumed that two-thirds of the diseases to which plants are subject, have their origin in deep planting. Bad soil, I allow to be a potent evil to contend with; but it is possible to ameliorate and improve its condition, and plants will for a length of time exist in even a few inches of good surface soil, if they are not by deep planting forced downwards into a crude and ungenial subsoil.

It may possibly be asked whether in the natural state of things, there is any justifiable ground upon which it may be assumed that the evils I have enumerated have any reference to the point in question. In my opinion there is; for every distinct individual plant throughout the vegetable world, which does not owe its existence as a plant to some scientific process at the hand of man, must necessarily have been originated by one of two means; either it must have sprung from the seed of its parent, or else, either from accident or the natural habit of that parent, a branch must have come in contact with the soil, have pushed forth roots, and so become an independent plant. There can be no such thing in nature as propagation by any scientific process; it must, therefore, follow, that from one of these apparently simple means, which I have mentioned, every plant, from the loftiest tree to the humblest weed, must have originated.

If we examine the circumstances which led to the development of a seedling plant, we shall, I think, find them to be illustrative of our point. When the seeds of a tree or plant have arrived at maturity, nature has provided means whereby they may be dispersed; this is effected in some cases by the action of the wind, and in others by the excitability of the seed vessel, which bursts open on the slightest touch, whereby the seeds are ejected a considerable distance from their parent; some seeds, particularly those in the form of berries, are the chief food of many species of birds, and are by them transported to distances from where they grew: by whichever of these means the seeds are dispersed, it must be obvious, that they are deposited on, or near the surface of the ground, and that when acted on by heat and moisture, so as to induce germination, it must be equally obvious, that whilst the radicle will descend into the soil, and extend its ramification in search of food, the plumule will assume a direction upwards, by which means the cotyledons, and consequently the vital

point will be elevated above the surface of the ground; in which situation it must necessarily remain during the existence of the plant, unless removed or operated on by the hand of man. Seeds which may happen to have been deposited to a greater depth, have within them a natural impulse, by which, when they are acted on by germinating influences, the plumule, or young stem, will continue to elongate until it reach the surface, ere it unfolds the seedslobes; in this case the operations going on in nature, serve as an additional proof that the collar was not designed to be buried with soil: for a seedling plant, once established, is not naturally liable to experience an accumulation of soil around its stem. It must not, however, be supposed that I wish it to be understood that plants raised from deeply buried seeds are at all desirable: for on the contrary, the simple fact that the roots of such plants must be deeply immured in soil, is a sufficient argument against them. The circumstances under which those plants are originated, which owe their existence to the union between their parent branch and the soil, tend equally to illustrate the point I have assumed throughout this paper; once, in contact therewith, roots are produced, which strike down into the soil. whilst the point from whence they sprang still rests on the surface. The manner in which the runners of Strawberry plants take root, will serve as an illustration of this.

From these circumstances it may be adduced, that in performing the operation of planting trees, but more especially fruit-bearing, and delicate trees, they should be set but little below the general surface. so that when finished, and the soil properly adjusted, it may have the appearance of a slight mound around the stem; but the surface of this mound on no account must be allowed to cover or accumulate above the collar. The roots must be encouraged to extend themselves horizontally near the surface. In the case of fruit trees, these latter should be protected by mulching from the period when vegetation commences, in the Spring, until their produce has attained its growth. The same principle applies with equal force to the case of potted plants, but, most especially to those of delicate habits, it being a general rule, in such cases, that in performing the operation of repotting, the bulbs should be slightly elevated. Whilst this is laid down as a general rule, there are instances in which it can be violated with impunity; for we can scarcely bring ourselves to imagine an injury as likely to be sustained by a willow-tree, from its being too deeply planted; and in the case of plants, such as the balsam, whose stems throw out roots in abundance, some benefit may result from planting them moderately deep. The pine apple and the cucumber are instances in which benefit is found to result from the practice; the latter is successfully grown under a system, by which, not only the stems

of the plants are progressively embedded in soil, but, also the principal branches by having a slight covering of light mould, throw out an abundance of roots, which are of considerable importance in swelling its fruit. In all these and similar cases, however, it is necessary to use caution in order not to indulge in extremes.

It would therefore appear, that ligneous plants, and half shrubby ones of delicate habit, are those which more particularly require this attention paid to them; and though it may at first sight appear to many as a subject of indifference, or at most of little importance: yet, experience would soon convince a candid observer, that not only the healthiness, but in most instances, the life of the plants depends very much on this apparently simple circumstance.

[From the humblest weed to the loftiest tree of the forest, every plant whatever, is more or less dependent on this principle. The process of transplanting is by no means a natural one; and no evil, as a consequent of this operation, is so common as that of deep planting, and none contributes more to the prevailing diseases of plants, and that ought to be guarded against with greater care.—Ep.]

OBSERVATIONS ON SOILS AND MANURES, AND HOW THEY MAY BE IMPROVED.

BY J. T.

The whole of the elements are necessarily brought into notice in the study of the vegetable kingdom; and on one of these, viz. the earthy matter composing the surface of the globe, I beg to offer a few remarks. We may suppose the primitive surface of the dry part of the earth to have been particles variously composed, according to the strata which have supplied them, and these, by the decay of animal and vegetable substances, have in time been converted into soils, the difference between which and earths is, that the former always contain a portion of animal or vegetable matter. Earths alone are allowed to be of no further use to plants than that of furnishing them with the means of fixing themselves to the globe. Plants have been made to grow in a certain quantity of earth, of which they consume only a small portion, and this small portion can be accounted for by what is found in their ashes. All plants contain some of the earths of the soil in which they grow; but these earths, as have been ascertained from the ashes of different plants, never equal more than one-fiftieth of the weight of the plant consumed. If earths be considered as necessary to vegetables, it must be as giving firmness to their organization. Soils affording nourishment to plants, as well as enabling them to fix themselves so as to keep their roots below the surface and their

leaves properly exposed to the atmosphere, it must be considered that the true nourishment of plants exists in soils and not in pure earths; but the earthy parts of soils are useful in retaining water so as to supply it in the proper proportions to the roots of the vegetables, and they are likewise useful in producing the proper distribution of animal or vegetable matter, when equally and properly incorporated with it. The roots of plants being so widely different, they consequently require different soils, the cultivator will, therefore, undoubtedly, endeavour to make himself acquainted with the various soils, as well as to ascertain the means of rendering them suitable to the nature of the plants he has under his care. The first thing to be ascertained is. the prevailing earths which compose the soil under consideration, and it is named accordingly. The term clayey should not be applied to any soil which contains less than one-sixth part of impalpable earthy matter. A sandy soil should be composed of not less than seveneighths of sand; and a soil to be peaty, should contain, at least, one-The soil called alluvial is composed of a half vegetable matter. heterogeneous mixture, being generally the deposit of rivers in clavey soils: in which few except tap rooted trees and strong growing herbaceous plants and grasses are to be found. In sandy soils many fine rooted plants thrive; but in peaty soils, which are generally moist, being watered either by the atmosphere or by subterraneous sources, and which being finely divided resist evaporation in a superior degree. more plants are found to thrive than in any other; therefore, on receiving plants or seeds, the native site of which is not known. it will be safest to place them in rather peaty soils, always avoiding clavey soils and such as are manured. The means of preparing, improving, and altering the nature of soils may be considered under various heads, namely, ridging, turning, and leaving them in a rough state during summer or winter; and, indeed, every variety of digging, ploughing, or stirring, is beneficial so long as the surface is kept free from all kinds of vegetation. In summer it allows a freer exposure to the sun, and, consequently, the soil becomes heated to a greater degree than it possibly could if evenly laid and covered with vegetation; and this materially assists in the destruction of vegetable fibre and insects. By ridging in winter, minute division of any decomposing matter the soil may contain, is obtained by means of frost; and thus rough stony soils will receive an accession of fine soil every winter. Pulverization is an obvious improvement to all soils, from the strong clays to the free silicious loams-the former, if not submitted to it, will become a hard mass, impenetrable to all but taprooted trees or fibrous-rooted grasses, which will exist upon its surface. and the latter will soon become too compact for the free admission of rain and air, or the free extension of roots. It promotes the increase

of temperature in soils, especially in those that are close, by rendering them open and allowing a free ingress to the air and warm rains in spring. It is also not only advantageous previous to planting or sowing, but in many instances during the progress of vegetation also, especially in the case of culinary vegetables, as stirring between the plants cuts off or shortens the extending fibres, and causes them to branch out numerous others, by which means they have a greater chance of finding the food the soil contains. Compression is essential to loose or spongy soils, and this is effected by treading, rolling, &c., but these operations are by no means to be carried too far, or performed when the soil is saturated with wet; but the proper degree of adhesiveness in all soils is best attained by the addition of other soils, or the substraction of some of the superabundant parts.

(To be Continued.)

ON GRAFTING.

RY F. R.

Agreeable to my promise, I proceed to give such practical hints for grafting, budding; and inarching, as will enable most young amateurs in the useful and delightful science of gardening, to amuse themselves in that department with tolerable certainty of success.

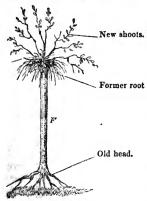
I will commence with the apple, as the most useful fruit, the culture of which, either for the kitchen or table, cannot be too The fault which gardeners generally fall into is, much attended to. the selection of stocks too small, and of improper sorts; a little attention to the appearance of the bark will obviate this. I have generally found that the tree which has a light yellowish bark produces a sweet or early apple; and a dark grey rind bears a late or hard sub-acid fruit; this, of course, can only be observed with any degree of certainty in young wood. I would, therefore, recommend, that when the scions to be grafted are of sweet apples, corresponding stocks should be selected, the same also with the sour varieties. That excellent, but almost extinct table apple, the Old Golden Pippin is frequently rendered nearly useless by injudicious grafting on large free growing stocks; the consequence is, that the scion cannot keep pace with the growth of the stock, and canker, with other diseases incident to this description of fruit, is the result.

To obviate this, procure stocks of Paradise Apple, or even the Siberian Crab, and by grafting the Golden Pippin on these, a better chance of their durability and bearing will be attained. For the common purposes of supplying the garden or orchard, no stock of less diameter than one inch should be worked; these may be grafted in either of the methods shewn in the diagrams marked (a. b. c.)



For the larger stocks or such trees as are headed down for the purpose of changing the sorts, the cleft or crown graft (C) is preferable, and I have succeeded where an espalier wanted a side shoot or branch, by inserting a scion in the bark of the stock in the following man-

ner:—With a small gauge make a hole as near the size of the scion as possible, in a slanting direction downwards, then bore with a gimblet to the depth required, keeping the bark as smooth as possible; point the scion, and insert it so that the bark of each may meet exactly, rub a little clay round the part and the operation is finished, (E.) This desirable end may also be obtained by bringing down a summer shoot where a branch is required. This will be noticed more particularly when treating of inarching.



Inverted Tree.

The best time for grafting the apple is from the middle of March to the middle of April, at which time the sap is beginning freely to ascend to perform its natural functions. Various are the theories respecting the ascent and descent of this fluid, and many are the errors which result from I am of opinion that little, if any, returns to the roots. During winter, the tree is in a state of repose, and on the return of the genial season of spring, when all nature awakens to beauty and utility, the expanding roots

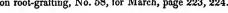
are called into action, seeking nourishment from the earth, the sap then ascends to clothe the tree with verdant foliage, to put forth blossoms and to mature its fruit, the superabundance being exhaled from the leaves. When this is fully accomplished, we observe a change, the "sear and yellow leaf" indicates a want of that invigorating fluid which now languidly flows, having fulfilled its appointed duty, till at last, by the coldness of the surrounding medium, it becomes checked or condensed, and the tree again resumes its former state of repose. By the simple process of inverting a tree, I have proved that at

all events there are no distinct ascending and descending vessels, as some have asserted, for the sap in its season ascended in the inverted trunk as freely as before the inversion; and while the branches had become roots, the parts immediately surrounding the old roots put forth branches which shot vigorously upwards. (F)

I have imperceptibly been led into a digression; but to return to the subject-the scions for grafting may be cut from October to February, or even immediately before they are required; they are, however, better for having been taken at a period when the beds were in a less forward state, and if inverted about two-thirds of their length in the earth of a shady border, they will remain for the winter uninjured. Should it be required to send them to a distance, the ends may be wrapped in wet moss, or inserted in potatoes, the latter method will be best for long journeys or even distant voyages.

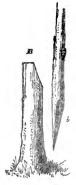
Much has been said respecting the origin of grafting; I have no doubt the idea was taken from the natural union of limbs crossing each other, and becoming united in the woods. That the present mode is of great antiquity for improving and continuing various sorts of fruit there can be no doubt. St. Paul alludes to it typically. Romans, xi. v, 17 to 24, where he speaks of grafting in the Gentiles, or the branches of the wild Olive on the good Olive-the people of God. Having thus far directed the young gardener in the choice of his stocks and scions, I shall now proceed to describe the mode of performing this operation.

Whip-grafting.-For the performance of this mode, see my paper on root-grafting, No. 58, for March, page 223, 224.









Cleft Graft.



Crown Graft.

Saddle-grafting.—Cut the stocks obliquely, the same as for the whip-grafting, then make a similar cut, but cut a less angle on the

opposite side, slit the scion and prepare the parts of unequal length, as at (a); so that on placing it across the stock, the points may exactly meet the bark on either side. Some make an incision and open the bark in the direction of the dotted line, and insert the long end of the scion, closing the bark of the scion over it. The with a brass string, or strong worsted yarn, and clay it well.

Cleft-grafting.—If a small stock of from one to two inches diameter, cut as for the whip or saddle graft, leaving a part of the head horizontal, as at (B); then with a small bill-hook, or strong knife, split the head of the stock, and insert a wedge; cut the scion with a thick and thin edge, as at (b), and insert it just within the outer bark; withdraw the wedge, tie and clay it.

Crown-grafting—For large old trees saw off the head or limbs horizontally, cut them very smooth with a sharp knife, split the stock and insert one or more scions as directed for the smaller cleft-grafting, or the back part may be opened by means of a small wedge or knife, and the scions prepared as at * with a shoulder inserted between the wood and bark, the shoulders resting on the eye of the crown.

These are but a few of the methods by which grafting may be performed, but they are the most simple and, consequently, the best; it is only necessary to bring the edges of the bark in exact contact at the proper seasons, and a union is almost certain to take place; practice will give the operator the most correct idea as to the neatest way of performing it.

There are many kinds of luting recommended for the grafts, but I have found common clay well-tempered with a little fine soft grass, the best. It should be formed into a pledget, or flat form, broad at one end, and narrow at the other, applying the broad end to the part where the string or ligature is fixed; then bring round the remainder, finishing with the narrow end, pressing it firmly down, then dip the hand in water and gently smooth it by grasping it at the top, close to the scion, and bringing it gently down to the end of the stock, closing the whole equally at the parts united.

Should it crack by the sun or wind at any time, let it be immediately repaired, to prevent rain penetrating, which would prove injurious.

[Our excellent Correspondent will find a letter at the Topsham Post-office, and we trust he will enable us to lay before our readers some account of his experiment alluded to. We mean the inverting of the trunk of the tree, and the roots becoming branches, and the branches roots. We are greatly obliged to F. R. for this interesting paper; it will be found an excellent answer to some recent queries on this subject.—ED.]

MR. PENN'S MODE OF HEATING BY HOT WATER. BY THE EDITOR.

Much has been said for and against the merits and demerits of this invention; it has been alike the subject of censure and approval the most unqualified, and that too by those of whom it might have been supposed there would have been a tolerable coincidence of opinion on such a subject, involving as it does a vital and most important principle in horticulture. During the last autumn, we visited Mr. Penn's garden, and saw the system in operation. We also saw it in other places, and our opinion will be found recorded in the present Vol., page 169, to which we beg to refer, having no wish to add or retract in any way from the opinion which we then formed of it. We still believe it to be of great importance to artificial climates, such as that of the interior of forcing houses and plant stoves by the atmosphere being kept in continual motion. That Mr. Penn has misapplied his heating apparatus, by which we mean that the pipes have not in all cases been placed in the most advantageous situations for diffusing their heat regularly throughout the various structures in which they have been fixed, that such has been the fact, no unprejudiced observer will attempt to deny; and of this Mr. Penn is now as fully aware as any man. We know that in some instances it has failed to give out the requisite amount of heat required during the severe weather of the past winter. But if it had failed in every instance, our opinion would have been unaltered. Mr. Penn does not profess to have made any new discovery with regard to the means of producing heat. He has, however, the merit of bringing into notice the existence of a principle, which, if we know anything of gardening, will continue to be applied in some form or other, so long as hot-houses are required. We again visited Mr. Penn's garden, on the 23rd of February, and found the plants in the stoves, and the Pine apples and Vines in the culinary departments in very good condition, especially the former, of which there was an unusual number in bloom. But if we had not found a greenhouse or stove plant alive about the place, this would not in any way have affected what we deem valuable in Mr. Penn's discovery. There would be an injustice to Mr. Penn and the want of candour towards our readers, were we not to express distinctly, that we consider the circulation of the air forming the atmosphere within the house, of great importance; but attach none whatever to his method of producing and maintaining the requisite temperature. There is an evident misconception in the public mind with regard to this mode of heating. It is the principle by which the continued circulation

•

Digitized by Geo



Staphelia tuberosa

of air is maintained within the house in connection with the heating apparatus, which we at least regard as meritorious, and not the apparatus by which the heat is produced; a failure owing entirely to a misapplication of the latter has, therefore, been seized upon as a reason to decry the whole thing. We differ alike from Mr. Loudon and Dr. Lindley, and think they have both done it some damage. The former by his unqualified recommendation of it when he first noticed it in his Gardener's Magazine, and the latter by the no less unqualified censure bestowed upon it in the Gardener's Chronicle. We by no means wish to arrogate to ourselves all wisdom, experience, and discrimination; we believe both these gentlemen have passed judgment upon Mr. Penn's mode of heating without bestowing quite so much time in the investigation of its merits as ourselves, hence the widely different conclusions at which they have arrived.

The almost endless variety of methods by which hot water is capable of being applied, can alone account for many of the whimsical and ridiculous notions which we constantly hear proposed and recommended respecting it. Indeed, there is nothing in the present day connected with horticulture, at least in which there is half so much quackery as that of heating by hot water. We, therefore, again repeat that of which we have but little doubt, and almost every experienced gardener will admit, that the circulation of air within the forcing house, where used in connection with hot water pipes properly applied, does supply a desideratum of the utmost importance to gardening in the early forcing of fruit and flowers.

REFERENCE TO PLATE LXI.

AZALEA SMITHII, variety Splendens.

NAT. ORD. ERIOACEÆ. CLASS PENTANDRIA MONOGYNIA.

Our plate represents a very handsome variety of this deservedly popular genus, now blooming in Messrs. Henderson's Nursery, Pineapple-place. We were struck with the profusion of bloom which it was bearing at the time we saw it, and it is a decided improvement on A. Smithii, of which it is apparently a variety. At present there are no plants of it for sale, but Messrs. Henderson hope soon to have a supply to offer.

There is not, perhaps, a more ornamental genus than the Azalea, nor one more easily managed with respect to cultivation. It is (speaking, of course, of the greenhouse kinds) not susceptible of injury from cold or even a considerable degree of frost. They are almost, without an exception, free blooming plants, example the White Indica, which, to insure blossom, it is only necessary to keep it alive. Also the Phœnicea, several varieties of Smithli, with others, all of which are of easy culture, certain bloomers, and requiring, in ordinary winters, no other protection than a cold frame. Some of the recent and most

valuable acquisitions to this section of the genus is the Variegata. In some respects this is more difficult to cultivate with success, and it is said it does not succeed on its own roots, and requires to be worked, that is, grafted on the strong upright stems of the A. alba. In this way it certainly does make very handsome plants, and grows and blooms most profusely. Besides those already noticed, it may here be worth while to enumerate the following:—

A Danielsianum .- A Chinese variety of somewhat stinted growth. They are

of an orange or carmine colour. Introduced by Capt. Daniels.

A. lateritia.—This is also an imported plant from China; the colour may be said to be rose.

A. florabunda .- This is also from the same country.

A. speciosa.—This is of hybrid origin, and one of Mr. Smith's, about the year 1830.

A. angustifolia.

A. grandiflorum.—A native of Japan, with deep rose coloured and oblong

A. spottiulatum .- Same country and same colour as the last.

A. pulchium.—Of hybrid origin; flowers large, and of deep rosy purple within. Supposed to have been obtained from Alba.

A. ignescens .- A native of China, spotted lilac and flame colour.

A. luteum .- As the name implies, the flowers are yellow and semi-double.

A. flore pleno .- This is the double purple, with semi-double flowers.

Several of the above varieties are very splendid, especially the variegata and the old white, which, if we disregard novelty, is decidedly the most ornamental species of the genus.

STYPHELIA TUBIFLORA, tube-flowered Styphelia.

NAT. ORD. EPACRIDEÆ. CLASS PENTANDRIA MONOGYNIA.

This beautiful plant is a native of New South Wales, and is one of the most ornamental greenhouse plants that we know for the early spring months. At the time our drawing was made but little else was in bloom; and the brilliant, but delicated hues of colour, had at the time a most striking effect. To those who have but little room, this plant is well worthy of attention; it is not quite new, but is a most ornamental object.

Besides this, there are seven or eight others of the genus, scarcely less ornamental. They require to be treated the same as the genus Epacris, that is grown in peat earth and sand, plenty of light and air, and but little other protection in winter than preservation from frost.

NOTICES OF NEW PLANTS.

IPOMÆA FICIFOLIA. Fig-leaved Ipomæa.

Bot. Reg.

NAT. ORD. CONVOLVULACEE. CLASS PENTANDRIA MONOGYNIA.

A very beautiful climber, with a tuberous root, and a slightly shrubby habit, flowering with great freedom under the commonest kind of cultivation. "When little more than twelve months old, it produces nearly five hundred flowers upon a cylindrical wire trellis two feet high; in fact, its disposition to blossom in this unusual degree, is one of the circumstances that more particularly recom-

mend it to the gardener's attention, especially as it is said to be accompanied by a corresponding diminution of foliage." It was raised from seeds at Messrs Salter and Wheeler's Nursery, Bath, but its native country is at present unknown.

SALVIA REGLA. The Regla Sage.

Bot. Reg.

NAT. ORD. LAMIACEÆ OR LABIATEÆ. CLASS DIANDRIA MONOGYNIA.

A fine species, from Mexico, introduced by the Horticultural Society. It has a slightly shrubby habit, and produces tolerably large bright scarlet flowers, and is a desirable plant for a greenhouse; but from its flowering so late, there is a doubt whether it will be a plant for out-of-doors decoration. It requires no particular treatment.

CYNOGLOSSUM GLOCHIDIATUM. Burry Houndstongue.

[Bot. Reg.

NAT. ORD. BORAGINACEÆ. CLASS PENTANDRIA MONOGYNIA.

A hardy bicnnial, growing from one to two feet high; it is of a straggling habit, and the herbage of a dull green, with very gay blue flowers. It may be sown in any dry situation in the open air, in May or June. Being a native of the mountains of India, it, in our country, suffers more from wet than cold.

SPREKELIA GLAUCA. Glaucous Jacobean Lily.

Bot. Reg.

NAT. ORD. AMARYLLIDACE &. CLASS HEXANDRIA MONOGYNIA.

This species differs from the old Jacobea Lily in having smaller and rather paler flowers, and a very glaucous foliage. It was introduced by the Horticultural Society from Mexico, and in their establishment is grown in turfy loan rendered free by a mixture of peat, leaf mould, and sand; in autumn, when the leaves and flowers have decayed, it is kept quite dry till the following spring; however, in all probability, the treatment applicable to the common Sprekelia will suit it. "The bulbs are perfectly hardy, and appear to like a low temperature, but they will not flower willingly unless they have a season of drought. They succeed well against the wall of a stove in the open ground, flowering in the spring, and sometimes again in the autumn, if the summer has been dry. They rarely blossom if watered through the winter in a greenhouse, but if kept dry and warm for a few months, they will flower as soon as they are watered in the spring."

SOBRALIA SESSILIS. Sessile flowered Sobralia.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ § ARETHUSEÆ. CLASS GYNANDRIA MONANDRIA.

A native of Mexico and other parts, and one of the least handsome of the genus; its stem is covered with small black hairs, and stiff ribbed taper pointed leaves; from the summit of the stem there appears a single rose-coloured flower, which is very fugacious; the lip is many degrees darker than the other parts.

BRASSIA LAWRENCEANA. Mr. Lawrence's Brassia.

Bot. Reg.

NAT. ORD. ORCHIDACE & VANDE .. CLASS GYNANDRIA MONANDRIA.

A handsome species, from Brazil, with large bright yellow flowers, tinged with green, slightly spotted with red, and very sweet-scented; like the rest of the genus, it requires the heat of the stove.

CYCNOCHES LODDIGES11 VAR. LEUCOCHILUM. Mr. Loddiges' Swanwort, white-lipped var. [Bot. Mag.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONOGYNIA.

This must certainly be numbered among the most remarkable of the Orchideæ.

It has lanceolate acuminate membranaceous striated leaves, and produces from near the top of the pseudo bulb long drooping scapes, bearing many flowers, remarkable both for their form and size; the sepals are nnequal, the uppermost one very narrow, brownish green, the two lateral ones much broader, greenish, with transverse brown blotches; sepals similar, but rather larger, spotless, falcate, and decurved. Lip lanceolate, ivory white, tipped with yellowish green, the base where it unites with the column spotted with red. Column remarkably long and slender, gracefully curved like a swan's neck, deep purple, above broader green, spotted with purple. It is a native of Guiana, and the flowers are fragrant.

STEVIA TRACHELIOIDES. Trachelium-leaved Stevia.

Bot. Mag.

NAT. ORD. COMPOSITEÆ. CLASS SYNGENESIA FQUALIS.

A handsome herbaceous plant, from Mexico, producing dense corymbs of very deep rich purple flowers. It may be grown in the open border, where it will produce higher coloured flowers than when grown in the greenhouse.

HELICHRYSUM NIVEUM. Snowy flowered Helichrysum.

Bot. Mag.

NAT. ORD. COMPOSITEÆ SENECIOIDEÆ. CLASS SYNGENESIA EQUALIS.

An exceedingly attractive hardy perennial, from Swan River, in the highest degree worthy of cultivation. "It has much affinity with H. macranthum, but is distinguished by its large capitula pure white cup-shaped involucre and perennial root." It was raised from seeds by Mr. Low, of Clapton.

ANCHUSA PETIOLATA. Petiolated leaved Alkanet.

Bot. Mag.

NAT. ORD. BORAGINACER. CLASS PENTANDRIA MONOGYNIA.

A showy perennial, which will probably be found hardy and prove an interesting addition to our flower borders; the leaves are long and lanceolate, and it produces racemes of deep purple blue flowers. It is a native of Nepal.

LOFIELDIA PUBENS. Downy-stalked American Asphodel.

Bot. Mag

NAT. ORD. MELANTHACEE. CLASS HEXANDRIA TRIGYNIA.

A harby herbaceous plant, from North America, which is now rare in our Botanic Gardens, although it was introduced by Mr. W. Malcolm so long ago as 1790. It is a plant of no particular beauty.

GARDOQUIA BETONICOIDES. Betony-like Gardoquia.

Bot. Mag.

NAT. ORD. LABIATEÆ. CLASS DIDYNAMIA GYMNOSPERMIA.

A handsome herbaceous plant, requiring no particular treatment, and flowering freely during the summer and autumn, both in the greenhouse and open border. It grows from two to three feet high, its leaves are from two to three inches long, ovate-cordate, at first green on both sides, but soon becoming purplish below, and it produces a spike of beautiful light purple agreeably perfumed flowers.

BATATAS BONARIENSIS. Buenos Ayres' Batatas.

Parton's Mag.

This new and beautiful climbing plant has been imported by several nurserymen from Buenos Ayres. It requires the temperature of the stove, where its unusually large deep pink flowers, which it produces in great abundance, render it very desirable. Mr. Paxton observes "Being an herbaceous species with tuberous roots, the stems decay annually, and the plant requires to be kept dry during the winter season. It may be placed for this period on any dry shelf in a warm shed, taking care alike to preserve it from frost and shrivelling. About the beginning of March it should be repotted in a rather rich loamy soil, with which a very little heath mould and sand may be incorporated, and removed to a stove of moderate temperature. If watered sufficiently, it will bear shoots from fifteen to twenty feet long during the summer; and these, if trained in opposite directions, will cover a very considerable portion of a small house. Early in the autumn, or towards the close of summer, the flowers will commence developing, and maintain a constant display for several months."

HARDENBERGIA COMPTONIANA. Lady Northampton's Hardenbergia.

NAT. ORD. LEGUMINOSEÆ. CLASS DIADELPHIA DECANDRIA.

A charming climbing greenhouse plant, generally known in nurseries under the name of Kennedya Comptoniana. Its stems are strong, smooth, and usually green; the leaves are distant in threes, long, and somewhat articulated; the floral racemes are long, particularly large, and composed of an astonishing number of flowers. From the remoteness of its leaves it is not adapted for planting out in a border, or training to the rafters or trellis of a greenhouse or conservatory; but it produces its flowers more freely, and has a neater and better appearance when confined in a pot, and closely trained round a circular or other shaped trellis.

CALLISTACHYS LONGIFOLIA. Long-leaved Callistachys. [Paxton's Mag. NAT. ORD. LEGUMINOSEÆ. CLASS DECANDRIA MONOGYNIA.

This, like most of its allied species, is rather a straggling plant, and not very snitable for small collections. But in large places it forms a fine object of which the leaves are the most conspicuous; while the large yellow and brown flowers are produced from the extremity of each shoot. Altogether it is rather an ornamental species.

PENTSTEMON HETEROPHPYLLUS, various-leaved Pentstemon.

Bot. Mag.

NAT. ORD. SCROPHULARINEÆ. CLASS DIDYNAMI ANGIOSPHERMIA.

This is a handsome, hardy, herbaceous plant, of tolerably easy culture, with long, narrow leaves, and comparatively large purple flowers. We grew this plant at Hackney during the last summer, but cannot say much for its general appearance, being very delicate, and of slender habit; it is, nevertheless, well adapted for rock-work.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

LŒLIA ACUMINATA.

A pretty species, with pale blush flowers, at least twice as large as those of L. rubescens, from which it also differs in the scape, being two-flowered and not racemose.

POLYSTACHYA REFLEXA.

A singular orchidaceous plant from Sierra Leone. Its flowers are white, with a faint tinge of pink, the lip is slightly tinged with green, abruptly bent back in the middle and below the bend, furnished with a bright yellow cushion of the most curious jointed hairs, which are arranged so compactly that the whole seem to form one solid mass.

CITRUS DELICIOSA.

This is a new species of crange, supposed to come from China. It is allied to the Mandarin, but is a spicy plant, with toothed leaves, and a small fruit by no means red either inside or out.

CONVOLVULUS VERRUCIPES.

An annual related to C. sibericus, and flowering in July.

ERIA BRACTESCENS.

A rather pretty orchidaceous plant from Sincapore, with erect racemes of delicate straw-coloured flowers.

EURYBIA CHRYSOTRYCHA.

A new shrub, susposed to come from New Holland.

HETEROPTERIS UNDULATA.

Supposed to be a greenhouse climber, and said to flower in July.

DENDROBIUM DISCOLOR.

A singular plant, with stout erect stems four feet high, swollen in the middle, and having terminal racemes of several dingy yellowish brown flowers, with the lip of the same colour, except along the middle, where it is decorated with five deep wavy plates of bright violet.

LINARIA GLANDULIFERA.

An annual, with small purple flowers.

SEVERINIA BUXIFOLIA.

The Citrus buxifolia of the gardens.

DENDROBIUM ELONGATUM.

A plant with erect stems a foot and a half high, at the end of which grow about four lanceolate leaves, from the midst of which springs a raceme of yellowish flowers spotted with red, but which seem unwilling to expand.

CŒLOGYNE CRISTATA.

A most beautiful species, with large blossoms, which are pure white, except the lip, which is decorated in the centre with bright yellow fringes and plates, the blossoms are fragrant.

OXALIS FRUTICOSA.

A shrubby species from Rio Janeiro, with deep yellow axillary flowers. It is remarkable in having the office of leaves performed by the leafstalks, which for this purpose become thin, broad, and lance-shaped, while the leaflets either drop off or only occur here and there.

ONCIDIUM LONGIFOLIUM.

A fine species with leaves nearly three feet long, which hang down or spread upon the ground. It produces dense panicles of flowers three feet long, which are large, showy yellow, and brown.

COLUMNEA SCHEIDIANA.

A plant with handsome deep green leaves, stained with crimson underneath, and producing numerous long yellow flowers all along its stems, which root at every joint, and appear to have a power of attaching themselves like Ivy.

DENDROCHILUM GLUMACEUM.

A singular grass like plant of no particular beauty.

MAXILLARIA CANDIDA.

A little Brazilian species of little beauty.

ACACIA UROPHYLLA.

This is readily distinguished from others of the genus by the size of the leaves, which are six feet long, including a fine long tapering point; the flowers are not very conspicuous, but are fragrant.

MISCELLANIES.

Treated as a half-hardy annual, the seeds of Portulacea Thellusonii may be sown in the beginning of March, on a gentle hot-bed, protected by common mats or thick canvass thrown over a temporary wooden framing; or they can be sown in pots, and these plunged in fermented material in any hot bed that happens to be in use. When the young plants appear, they should be potted in small pots, and kept for a time in a warm frame or greenhouse, and afterwards transferred to an open frame, which should be covered at nights in cold weather, till they are required for transplanting. About the middle of May they should be transferred to the open ground; but a dry sheltered border or rockery must be prepared for them, and the soil should not be of a wet or retentive nature. They will thus flower during sunshine (for the flowers do not expand except under the direct rays of the sun), for a lengthened time, and seldom cease before the arrival of frost.—Paxton's Mag.

PELARGONIUM, ITS CULTURE, BY MR. COOK, OF CHISWICK .- Mr. Cook strikes his cuttings about the beginning of June, or sooner, if the plants will bear cutting. As soon as rooted, they are removed into sixty-sized pots, and set in a shady situation on boards or slates, or in a cold frame. When rooted, they are removed to an open situation, and as soon as the plants will bear the sun without flagging, they are stopped. In September, they are repotted into forty eight sized pots, and at this time he commences training. In December and January, those that are sufficiently strong, are again shifted into sixteen sized pots; in these pots they are allowed to bloom. About the middle of July or beginning of August, they are headed down and set in a shady sheltered situation; and when the plants have shoots nearly an inch long, the soil is nearly all shaken from the roots, and are again repotted into the same sized pots. As the shoots are formed they are carefully thinned out. In the greenhouse, the plants intended for exhibition are kept four feet apart; the front sashes are kept open on all convenient occasions. In November, the plants are stopped, and a stake put to each shoot. The leaves are thinned out to allow the air to circulate freely. In December and January, the strongest plants are again selected and potted into eight-sized pots, and at this time additional heat is applied to enable the plants to root rapidly. In February, they are syringed in the afternoon, but sufficiently early to allow them to dry before night. In March they are again repotted in No. two-sized pots, water is now very liberally supplied. When the flowers begin to open, a shading of cheese cloth is used on the outside of the house. Air is admitted before the sun has much power on the glass, and this

is found to prevent the attacks of the green fly. The success of all the other operations depends on the mode of applying fire heat. The fires are lighted at 3 or 4 o'clock in the afternoon, allowed to go out about 9 or 10. They are again lighted about 3 or 4 in the morning. The thermometer during the night is kept at 40 degrees or 42 degrees Fahrenheit. The soil is prepared thus—a quantity of turfy loam is chopped and laid up in a heap, a quantity of fresh stable litter is then shaken up and laid in the form of a mushroom bed. If the weather is dry at the time the manure is well watered, liquid manure and the steam or ammonia is prevented from passing off by a covering of slates. In this state it is allowed to remain fifteen or sixteen days, and is then mixed with about an equal quantity of fresh loam, and when the mixing is completed, the heap is at last covered with loam. At the end of a month or five weeks it is turned over three or four times, in order that the dung and loam may incorporate well together. At the end of twelve months it is fit for use. To two barrowfulls of this compost is added, one of leaf mould, and a peck and half of silver sand.

PELARGONIUM, ITS CULTURE, BY MR. W. CATLEUGH .- The cuttings are placed in an open boarder, about the middle of July, and the situation selected is one fully exposed to the mid day sun. In about six weeks the cuttings are rooted, and are then potted into 60 sized pots. The pots are placed in a shady situation, on boards or slates, and in three weeks they are removed to a more exposed and airy situation when the wood becomes hard. They remain here till nearly the end of September, when they are taken into the house for the winter. At this time the plants are stopped at the third or fourth joint, and they are at the same time shifted into 48 sized pots. The soil is a turly loam and sand. After this shifting, but little air is given for about 8 or 10 days; but after this time as much air is again allowed as the state of the weather will admit till about the beginning of December, when the pots will be well filled with roots, and require to be again removed into 32 sized pots. Bone dust is added but with caution; and never near the surface of the soil, because it is of too drying a nature. The plants are again stopped, and the temperature of the house is maintained at about 45 deg, at the end of ten days it is allowed to fall to 42 or 40. The flues are damped two or three times every night, to keep the air of the house moist, allowing top air when the weather is favourable. About the middle of February, the plants intended for large specimens are again shifted into 42 sized pots; and the vigorous sized kinds require a size larger. At this time each shoot is tied separately to a proper stake. Fires are discontinued about the beginning of April, and the plants are syringed over head three times a week, and the house closed for the night. This treatment is continued for about a month, the house being damped every evening, and the top sashes opened the first thing in the morning, and as much air allowed during the day as can be given with safety. When the plants show bloom they are freely watered and shaded with canvass. At the time of housing the plants, the dead leaves are carefully removed, and when the green fly make its appearance, a fumigation of tobacco is used, care being taken that the plants are in a dry state at the time: they must be well watered in a day or two afterwards. When the flowering season is over, the plants are removed to an exposed situation for a fortnight, till the wood is hard, when they are cut down. Those plants intended as specimens the second year after heading down, are placed in a sheltered situation, where little water is given, and when the shoots are an inch long, they are shaken out of the pots and planted in others two sizes smaller; by this treatment they are kept more healthy during winter. When thus potted

they are placed on a stage in a shady situation, and removed to the house "at the proper time," and treated during the winter as already described. The plants intended for exhibition are occasionally watered with liquid manure syringing overhead is discontinued. Gauze blinds are used, by which bees are prevented entering the house to injure the bloom, and are on no account allowed to flag by exposure to the sun, or for want of water, especially recommended to commence the training of the plants at an early period of their growth, while the shoots are young and pliable. By early training, the shoots acquire the desired form, and fewer stakes are therefore required. The flowers are arranged so that there is an equal distribution of blooms over the head of the plant; to effect this, small willow twigs are used. "Practice alone can teach the art of preparing flowers for exhibition. The less art is used the better, and the means should always be kept out of sight." "The compost I use for my Pelargoniums is the following:-Two barrows full of good maiden loam, with the turf, one ditto well rotted cow dung, three years old. This requires to be frequently well turned over in winter, to destroy the worms and insects. One peck of silver sand, one ditto bone dust; for the winter repotting, a little more sand is added."

[We have re-written from the Gardener's Chronicle, and somewhat abridged these two articles on the culture of the Pelargonium. It will be seen that the directions of the last gentleman are rather general than particular; but there is a tolerable coincidence in the practice of these two eminent growers. Mr. Cook's instructions are clear and minute when needful, and his mode of preparing compost is most admirable.—ED. [

NEW HYBRID ALOE .- This beautiful hybrid, raised by Mr. Ricketts, gardener to W. C. Baldock, Esq., Petham, may be popularly described as exactly intermediate between the Partridge-breast Aloe (Aloe variagata) and the intermediate Tongue Aloe (Gasteria verrucosa.) It partakes largely of the character of its male parent, A. variagata, having three-cornered channeled leaves, which are disposed in about six whorls; but the flowers are more inflated, and about half as long again as those of the Partridge-breast Aloe. The hybrid has the warts of the female parent; but these, instead of being scattered indiscriminately over the whole surface of the leaves, are arranged in fasciæ, somewhat in the manner of the markings on the leaves of A. variagata. The edges of the leaves are callous, and rather more serrated than those of the male parent, which it resembles in its mode of growth. I have little doubt that this plant will become a general favonrite, as scon as it is sufficiently known; not only on account of its distinct and handsome appearance, but also from its possessing the property of flowering when quite young, the seedling plant having flowered when only three years old .-Gardener's Chronicle.

PROTEA. This is an extensive genus of magnificent evergreen shrubs, generally considered difficult of culture; but this supposed difficulty may be removed by attending strictly to the watering of the plants. The soil best suited for them is light turfy loam, mixed with about a third part fine sand; the pots must be well drained, and it is advisable to mix some small pieces of broken freestone with the soil in potting, to prevent them from retaining too much moisture; the roots are also fond of running among the freestone or broken potsberds. Care must also be taken not to let them droop for want of water, as the young roots are of a fleshy substance, and are as liable to suffer from too much drought, as they are from too much water, whence the necessity of the waterings being regular and moderate. Ripened cuttings will root when taken off at a joint, planted thinly

in send, and placed under a glass, but not in heat; the glass should occasionally be removed to allow them to dry, as they are liable to damp off. Water them, but not over the leaves, whenever they want it, and let them get a little dry before the glass is placed over them again.—Paxton's Botanical Dictionary.

By the following very simple method, frames and pits may be kept comparatively free from wood lice; at any rate the insects might so far be subdued by it as not to be injurious to plants. Put a cold boiled or roasted Potatoe, (sliced:) into a small flower pot, cover the potatoe with moss, leaving a little hanging ont of the pots, by way of enticing the insects to enter, then lay the pot on its side in a corner of the frame. Wood-lice feed in darkness, and, at the approach of day they trot off to their hiding places, in cracks and crevices, or amongst the loose soil or bark : the moss is therefore, necessary to induce them to remain in the pot, to which they will flock in hundreds, after they have once tasted the potatoe. Every morning the pots should be taken out of the pits, and the insects destroyed. The same bait will serve for a week or longer. If properly attended to, half a dozen pots so prepared, will soon clear a frame of this troublesome insect .- J. B. Whiting .- This appears to be an excellent plan for destroying these pests. At any rate, we know that the simple plan of placing the pots half filled with hay or moss, in their lurking places, which is generally in frames towards the front corners, is a very successful mode of getting rid of them; the pots should be examined every morning, after uncovering, and the insects shaken out of the pots into a pan of scalding water .- T. M.]

The following practical directions for raising Alstramerias from seed, are by Mr. Scott, of Bury Hill, a successful cultivator of this genus. "The seeds should be sown immediately, in sandy loam and rotten dung, and kept in a greenhouse, as they will not require heat; when the plants are about an inch high, they may be potted singly into very small pots, and kept in a growing state, until they have formed their tubers: if suffered to die down before that period, they will never shoot again, which is the cause of many persons losing them, after they have got them up from seeds.—Horticultural Proceedings.

We are informed by a friend in Cornwall, that the Salvia Patens has survived the severity of the past winter, both unscathed and unprotected. It also stood in the same part of the country, in a very cold locality, perfectly hardy, during the preceding winter. We think it by no means improbable that it should be found half-hardy, in dry warm situations in the Midland Counties,

"What we desire to see is some grand comprehensive undertaking, wherein every material, everything that can be rendered available to the instruction of youth devoted to the profession, shall be collected and maintained, either directly by the Government, or by the united efforts of zealous and affluent individuals, constituting themselves an influential body (as, for example, the now Royal-chartered Society of Agriculture), and subscribing to funds to purchase a large breadth of land whereon all the operations of horticulture shall be performed by the students in the open air departments, and in every variety of glazed or defensive erections, under the supervision of directors qualified to undertake, note down, and record every observable fact and traceable cause. This system would imply courses of lectures on soils, water, moisture, vapour, fermentation, gases, their extrication, mutual attraction, combination, and results—air, light, heat, electricity, galvanism, magnetism. These are all employed by nature and, in

full activity, they constitute the class of great natural agents. Botany, in the most comprehensive sense of the term, would form a very important feature; so would the natural history, climate, introduction of every known plant, and the best method of culture, subject to discovery and improvement."—Paxton's Magazine.

PELARGONIUMS.—Mr. Foster, of Clewer, by whom so many magnificent varieties have been raised, considers the following as best of those now out:—Conservative, Matilda, Erectum, Sylph, Nymph, Beauty, Wildfire, Sultan, Lady Douro, Prince Albert, Amethyst, King John, Queen of the Fairies.—Gardeners' Chroniels.

PROPAGATION OF PINES.—Mr. Mearns, formerly Curator to the Manchester Zoological Society, and now Curator to the Leeds Botanical and Horticultural Society, slips off the pipings, and having the ground previously smooth and fine, he lays the piping or slip horizontally, and presses it into the ground in a doubled form, and making the ground firm, and setting the grass end upright with the other hand, the operation is complete. The cutting off of the rough end is not thought to be necessary, and no part of the grass is shortened. When planted in this way, they are well watered, and no shading is required. In this manner he has propagated great quantities, with scarcely any of the pipings failing to grow—Gardeners' Chronicle.

"Any one who has visited the Botanic Garden of Edinburgh for some years past, has been struck with the brilliant success which has attended the cultivation of the many forms of Banana, under the judicious management of Mr. M'Nab, and the immense quantity of high-flavoured fruit which has been produced. In cultivation, in the Botanic Garden, all the varieties of fruit-bearing Bananas have been planted in large tubs, containing extremely rich soil, have had much water, and been kept in great heat. This flower bnd, as I have proved, by cutting down full grown plants, remains at the root till a time after the plant has attained its full size, varying according to its treatment, and then pushes its way upwards; its appearance at the top of the stem being preceded by the evolution of one or more leaves smaller than the rest."—Sir William Hooker in Bot. Maq.

QUERY.—I should feel greatly obliged to be informed, which is the best way to work the orange tree—by grafting, binding, or inarching, and the proper seasons to perform the operations. Would soap suds prove injurious in watering plants? as I see it is recommended by a Yorkshire Farmer, in the Gardener's Gazette, to water vegetables with.—A Subscriber.

[Perhaps our excellent correspondent, who has this month favoured us with his interesting communication on the subject of planting, will be so kind as to answer this query.—Ep.]

[In answer to the query of a Yonng Practitioner, near Rotherham (page 214) we would recommend such a house as the following for the culture of the Persian melon; say 10 or 20 feet long, having a front trellis of about 5½ feet wide, and within 18 inches of the glass in front; and the opposite side extending to within two feet at the back wall. The path through the house to pass between the back or upper end of this trellis and the back wall. Over this path a trellis might be formed, and the plants grown from boxes or pots, supported at the proper height by a stage or frame-work. In such a house as this, we believe we have seen them grown to great perfection at Chatsworth.—ED.]

MONTHLY CALENDAR.

FLOWER GARDEN.—Plant such kinds of herbaceous plants, and deciduous shrubs as were deemed too tender for planting in March. Sow all kinds of hardy annuals and perennials, as early in the month as possible, also, tender, or half-hardy annuals on warm borders; and at the latter end of the month transplant such as have been raised on a hot bed, or under glass, taking care that they are previously well hardened. Do not delay preparing and renewing lawns, (p. 198.) and destroy moss on them, (p. 37.) Hoe, rake, and stir the surface of flower beds and borders, remove dead leaves, destroy insects on roses, (p. 22.) roll and sweep grass and gravel, and attend to neatness.

PLANT STOVE.—Shift, propagate, and stimulate the different kinds of plants, according to their nature; and attend more especially to Orchidacee, which ought to be potted immediately, as they will now be commencing their annual growth: but they should not be meddled with, until they show signs of it. The temperature of the stove should now be gradually increased, and a corresponding degree of moisture kept up at the same time, attending to ventilation. Remove Epiphyllums to the stove, (p. 29.) remove moss, &c., from the surface of the pots, destroy insects, &c.

GREENHOUSE.—Plants in this department, will require the same attention as far as regards shifting or reporting, as those in the stove; but no plant should be removed to a larger pot unless it really needs it: and such as are reported should only be put in a pot, just one size larger, as it is much better to report them frequently, when their roots become compressed than to give them a large shift at one time. Vigorously prosecute propagation in all its branches; and carefully attend to the supply of water given to the plants, more especially such as have

been repotted.

PARK AND PLANTATIONS.—Finish planting and sowing deciduous trees and shrubs, as soon as possible. Plant evergreens of all kinds, and vigorously prosecute road making, draining, and indeed all operations on the ground, as well as buildings.

KITCHEN AND FRUIT GARDEN.—Complete planting or removing fruit trees as soon as possible. Graft and sow kernels, for stocks or new varieties, and attend to mulching newly planted trees, and water them if the weather is dry. Sow seacale and asparagus, also salsafie, scorzonera and beet, for a full crop, savoy, borecole, and Brussel sprouts, early in the month, if they have been delayed so long. Brocoli, cauliflower, and celery in the first week, also, peas, beans, lettuce, spinage, and other things for a succession. Plant potatoes for the principal crop, and all kinds of herbs. Transplant lettuce, cabbages, and other things that have been raised under glass. Stick peas, tie up lettuces; hoe, weed, and clean and stir the surface of the ground in fine weather.

PEACH HOUSE, VINERY, AND FORCING DEPARTMENT.—Be particularly attentive to peaches, to keep them neatly tied down, and clear from insects, and mildew. Vines will also require great attention, lest they grow against the glass or other things, and break themselves off, or get scorched by the sun. Finish shifting pines as soon as possible. Prepare hotbeds for melons and cucumbers, and sow the general crop for the ridges. Attend to strawberries, that they have a plentiful supply of water and air, and introduce others in succession. Sow French beans in succession, make mushroom beds, &c.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LX.-MAY, 1841,

ON THE CULTURE OF THE VINE IN POTS,

BY A FRIEND TO HORTICULTURE.

The growth of the Vine in pots, is a branch of culture which is now engaging the attention of Gardeners, and is certainly deserving of more general application. It seems best adapted to very early crops, if the proper kinds are cultivated; or where there is not the convenience of a very late house, it might be of some importance, as the fruit, when ripened, could be placed in a dry airy room, still remaining on the plants, in which case it might be kept in very good condition, for a long period. In either of these cases it appears to be particularly worthy of attention, and I shall now proceed to notice the most approved practice in growing them.

The mode of propagation most generally adopted, and that which is found best suited to this system of cultivation, is by single eyes; these should be taken from well ripened shoots, planting those only which are plump and prominent; they may be planted at any convenient time during February or March, but ought not to be placed in a strong heat until the latter month. A bottom heat of ninety degrees may then be given them; but great care must be taken that the atmosphere is not too abundantly charged with moisture, or they will be liable to damp off; this may easily be prevented by giving a small portion of air early in the morning, or if there is much steam in the bed, a very little air may, with advantage be left all night; these minutiæ will, however, suggest themselves to the cultivator, as circumstances may seem to render needful. The buds, or eyes, should be cut with about half an inch of the wood on each side of them, and they may be planted rather thickly in 24 sized pots, using a light soil; after they have vegetated, and grown an inch or two, they should be potted carefully into 60 pots, and returned to a moist bottom heat. Here they must be kept near the light, and have every attention paid them, as regards the admission of air, and similar matters; shifting them as soon as they make sufficient root, into 32 pots, still keeping them in the same growing heat, and increasing the quantity of air, as the weather may seem to dictate, which will, in general, be sufficient to inure them to a warm greenhouse, into which they should be removed when they have made good roots, and be here shifted into large pots, giving them a daily supply of liquid manure, and paying every attention to staking and supporting the shoots. The soil used at first should be a sandy loam enriched and lightened by large additions of leaf mould and decomposed manure. A greater quantity of loam may be used at each successive shifting; and, at the final one, on removing them to the greenhouse, the soil may be equal parts of loam and leaf mould. I have said they should be removed to a greenhouse; but any small house in which they can be accommodated with sufficient room would answer equally well, provided that its atmosphere could be regulated according to their wants. After they receive this shifting, which I have mentioned, they will remain inert for perhaps two or three weeks, or longer, during which time it appears that they are forming their roots, consequently, the application of the liquid manure ought not at this stage to be neglected. It may be used alternately with pure water, and they should have an abundant supply, if the necessary precautions are taken in potting; to secure ample drainage, which is of the utmost importance. In potting, the neck or collar of the plants, should be kept on a level with the surface, or the roots will not be in a condition to perform their proper functions. When the plants begin to grow they must not be neglected, as the growth will be exceedingly rapid, frequently from twelve to twenty feet and upwards, in about a month; consequently it will be a matter of importance to give them some efficient support. This will be best effected if they are grown in a small house by themselves, by training them upwards near the glass; in other cases the best local means must be adopted. The atmospheric temperature in which they are grown, should be that of a warm greenhouse; giving them a liberal circulation of air; shutting up early, and having frequent recourse to syringing, as a means of keeping up a due degree of humidity, and also of keeping the plants free from insects. This routine must be continued until the plants have made their growth, after which the object will be to ripen and mature the wood as perfectly as possible; this must be done by lessening in a very gradual manner the supply of moisture, and by taking advantage of sun heat, to increase the temperature of the house, at the same time admitting as much air as is consistent with the increased temperature.

As soon as the shoots begin to assume appearances of matnrity, they should be gradually hardened to the open air, and at length removed entirely out of the house and placed in a north aspect, where they may experience as much winter as possible. Here they may

remain until they are wanted to commence forcing; on placing them in the house for this purpose, they may either be trained upwards near the glass, or coiled around three stakes, and placed on a stage near the glass; in either case, their treatment will be that of Vines under ordinary systems of forcing—namely, a gradual and progressive excitement, with abundance of moisture whilst breaking; a comparatively dry atmosphere, whilst in blossom; and abundance of both heat, and moisture, after the fruit is set, and is swelling off—taking care in all these cases that the transition is not too sudden.

As far as regards sorts, there are none better than the Black Cluster, and Royal Muscadine, if the object is early fruiting; or the Muscat of Alexandria, and West's St. Peter, if it is wished to preserve them until a late period; in either case forcing must be commenced at a period consistent with the respective circumstances.

[We are obliged to " A Friend to Horticulture" for the above paper, and have no doubt he will excuse the following remarks which we would make on this subject. With those who recommend the culture of the Vine in pots, it is a favourite topic, as an argument, that the Vines may be carried into the dining-room and the fruit cut from the clusters, just as they may be required: they are thus to be brought backwards and forwards so long as there are any fruit remaining on the plant. In theory this is a pretty idea, and nothing could be more pleasant than to cut the bunches of fruit from the living plant from day to day, until the whole were consumed. Our own experience in grapes would teach us to expect from such a practice, results any thing but satisfactory. Grapes which have been for some time exposed to the atmosphere of a dining-room, are seldom fit to appear a second time at table. We do not by any means wish it to be inferred from these remarks, that we disapprove of the system. We think there are a great variety of circumstances wherein it may be had recourse to, and with excellent results. The system is capable of improvement, and much more may be effected by it than is generally supposed. While on this subject we may mention what came under our own knowledge during the last severe winter. A large establishment where the Vine has been cultivated for many years, and to great extent, for Covent Garden Market, and with a degree of success unequalled by any thing to be seen, we had almost said in any other garden whatever, whether public or private. The Vineries are built without any order or regard to aspect, some are placed fronting the west, others east, some south, and so on; but all are heated with common brick flues, and during the intense frosts and high winds of January last, in order to keep the temperature of the early Vineries at the proper height, the several flues were often nearly at a red heat near the furnace, with the Vines immediately over them, maintaining the highest degree of luxuriance and health, and in no situation in these houses are the crops of grapes either more abundant, regular, or better in quality. We have frequently seen this peculiarity in the Vine before, but never to such an extent. The temperature at the end of the house where the fire entered, could scarcely be less than 150 degrees .- ED.]

SELECT LIST OF SHOWY ANNUALS,

BY ANNUS.

At the present season the following list of Showy Annuals may not be without its use to persons interested in Floriculture.

NAME.	FEET.	COLOUR.
a Aster German	1 to 1½	various
a Bartonia aurea	1	yellow
a Bidens diversifolia	2	yellow
a Cacalia coccinea	1	scarlet
a Calendrina speciosa	2	rose
a Calliopsis atrosanguinea	$2\frac{1}{2}$	orange and dark blood
a — Drummondii	2	yellow and brown
c Clintonia pulchella	1	blue
a Collinsia bicolor	` 2	white & purple
a — grandiflora	1	pink & blue
c Cuphea silenoides	2	bluish
a Erysimum Perofskianum	2	yellow
a Escholtzia crocea	14	orange
a Eutoca viscida	3	blue
a Gilia tricolor	2	lilac
a — alba	2	white
a — tenuiflora	2	pink
a Heliophila araboides	1	blue
a Hibiscus Africanus	3	cream and black
a Kaulfussia amelloides	1	blue
a Leptosiphon androsaceum	ı	lilac
a ——— densiflorum	1	purplish pink
b Lisianthus Russellianus	2	purple
c Lobelia heterophylla	2	blue
a Lupinus Cruickshankii	3	blue
a Malope grandiflora	3	crimson
a Nemophila insignis	17	blue
a ——atomaria	11	white
a Platystemon californicus	1	sulphur
c Phlox Drummondii	2	varions
b Rhodanthe Manglesii	1	pink
c Schyzanthus humilis	2	lilac
c venustus	2	rosy lilac
c — Priestii	2	white
a Sphenogyne speciosa	11	orange and black
a Stocks German and ten week	2	various
Tropæolum canariensis	10	yellow
a Zinnia elegans, varieties	2	various

In the above list those marked (a.) may be planted out in favourable weather during the early part of May, having been previously raised on a slight hotbed or in pots; or if it is preferred to sow them in the open ground, this might have been done in March and April, and again in May for a succession. They require no peculiar treat-

ment or soil, beyond that which most other annuals delight in, namely, a free and light rich soil, and a warm and dry situation. Indulgence in these matters, although not absolutely necessary, as they will do well with a very moderate share of them, yet it is found in most cases to produce corresponding results, Those marked (b.) in the list require to be sown in August or September, in pots, of light rich earth, and kept in a dry position near the glass, in a greenhouse during winter. They should be carefully shifted in the spring, and about April, planted out under a handglass, on a warm border of light rich soil, retaining the handglass over them as long as the weather may render needful. Phlox Drummondii, and those marked (c.) may be sown in heat in February and potted off, and kept in a frame till all danger of frost is over, and if then planted out into good soil, they will flower abundantly. . Tropcolum canariensis is an interesting climber of rapid growth, flowering very abundantly during summer and autumn; it may be sown in April, and potted off singly when quite young, and planted out where it is intended to remain in May or June.

LIST OF SHOWY PERENNIALS ADAPTED FOR GROW-ING IN THE FLOWER GARDEN, DURING SUMMER.

BY THE EDITOR.

This being the season for planting out ornamental plants into the flower garden, the annexed list has been prepared, in order that any person who may choose to adopt the system of planting in zones of different colours and forms, may have something to which they can readily refer, in order to ascertain the relative heights and colours of their plants.

•		
NAME.	FEET.	COLOUR.
Anagallis grandiflora	1	red
Phillipsii	1	blue
lilacina	1 1/2	rosy lilac
Amphicome arguta	14	pink
Calceolaria varieties	2	various
Crucianella stylosa	1	pink
Diplacus puniceus	3	crimson
Fuchsia globosa	3	scarlet and purple
fulgens	3	scarlet
* Gallardia picta	1	yellow and crimson
Gardoquia multiflora	14	purple
Heliotropium Peruvianum	14	lilac
* Lantana sellowi	1	purple
· Linum flavum	1	yellow
Lotus Jacobæus	2	chocolate

	NAME.	FEET.	COLOUR.
*	Lobelia cærulea	1	blue
*	gracilis	1/2	blue
	pubescens	1	blue
	Mimulus cardinalis	3	scarlet
	roseus superbus	3	rose
	Malva creana	2	light red
*	Nierembergia calycina	1	white
*	Œnethera Drummondii	1	yellow
	Oxalis florabunda	1	rose
	Petunia phœnicea	2	purple
*	varieties		•
	Penstemon gentianoides	3	crimson
	fruticosa	3	scarlet
	Senecio elegans double	2	purple
	Scarlet Geranium	2	scarlet
	Salvia chæmedryoides	` 1	blue
	fulgens	3	scarlet
	Grahami	3	purple
	patens	3	azure
	Thunbergia alata	1 to 5	buff
	alba	1 to 5	white
	aurantiaca	1 to 5	orange
	Verbena Lambertia	$2\frac{1}{2}$	rosy lilac
	arranana	1	purple
	Drummondii	11/2	lilae
•	Tweediana	1	rosy crimson
4	latifolia	1	deep scarlet
*	melindres	1	scarlet
•	superba	1	scarlet
	incisa	1 ½	pink
*	pulchella	Į.	purple
•	alba	1/2	white
*	elegans	1	crimson
	teucrioides	11	creamy
*	Nielli	1	deep lilac

Those marked with an asterisk should be allowed to spread on the ground, rather than be supported in an erect posture. Anagallis should have low trellis work to spread over, it is peculiarly adapted for the edges of flower beds. Thunbergia will vary in height, according to the position in which it is trained; the other kinds contained in the list will require erect support. Amphicome requires a very dry and well drained situation. It thrives in a mixture of sandy peat and loam.

ON THE CULTIVATION OF BORONIA SERRULATA.

BY T. M.

The Boronia Serrulata is a plant which is more frequently seen in a sickly than in a healthy and thriving condition; and yet it is a plant

of the easiest culture, provided certain not very difficult points are attended to. The great beauty of the plant, under good treatment, is so far sufficient to render it a universal favourite, that I venture a few hints upon its treatment, in the hope that they may be found useful to those who are not versed in the cultivation of these and similar plants.

The soil which is best adapted for them is a fibrous and very sandy peat, and it is absolutely necessary to use great precaution in potting, to give them complete drainage; in fact, much of the success of growing them is dependant on this point, as they require the most assiduous attention, in watering during the summer season. The application of this element should be in small quantities, and supplied frequently; so that, whilst anything like excess is avoided, the plants may never experience the least degree of want. It delights in abundance of light, and therefore should never be crowded by other plants; and it will be found to grow vigorously, if submitted in spring, after potting, to a slight increase of temperature. A pure atmosphere is essential to its growth; but like Epacris, it does not like to be exposed to a current of air, or even to stand very near where air is admitted, as it is exceedingly liable to suffer by an exposure to cold winds. It requires to be kept in the greenhouse during the summer. and is much benefitted by slight shading during hot sunshine. tying, it should be spread out by little twigs, so as to keep the centre of the plants open, thereby allowing a free circulation of air and light. If these conditions are complied with, healthy and vigorous blooming plants will be the result.

OBSERVATIONS ON THE METHODS OF CULTIVATION ADOPTED AT MESSRS. LODDIGES AND KNIGHTS, WITH REFERENCE TO THEIR ORCHIDACEOUS PLANTS.

BY J. Z.

Heat and moisture supplied in great abundance during their season of growth, are the grand points that are recommended for the successful growth of Orchidaceous plants; a greater or less amount of shading is also held as requisite during the spring and summer months. On these points, the practice of some eminent cultivators appear to differ, perhaps more, however, in degree, than in general principle. I make these remarks, having understood that Mr. Knight has for some time past had recourse to shading by means of very thin and open canvass, which is allowed to remain on the house night and day, and the condition of his plants would lead one to suppose that the practice was a beneficial one, as they are in a very healthy condition. The Messrs. Loddiges, on the other hand, have not yet

adopted any shading whatever; and if a person were to judge by the appearance of their plants, there is certainly none required. On the degree of humidity kept up, there is considerable difference, for whilst all Orchidaceous houses are necessarily kept in a moist condition, those of the Messrs. Loddiges are much more so than any others that I have witnessed; and yet it is not to be supposed that too much moisture is allowed, for in this establishment they appear to grow and flower freely. It does appear, however, that too indiscriminate a system of watering is adopted, especially with many of the smaller plants, although it may be pleaded as a palliative, the vast number of plants which here require attention, and, consequently, the immense labour which would ensue were any other plan followed.

Were I to offer an opinion on these matters of difference, I should be inclined to think that a person adopting a medium course, and carefully avoiding either extreme, would ensure as great an amount of success as it is possible to arrive at, and I have noticed the subject from an idea that some persons might not be able to account for the differences in question.

[Our Correspondent appears to think there is a want of agreement in the practices of the two Nurserymen in question, with respect to their modes of treating the Orchidaceous Epiphytes. They are, at least, agreed on the subject of shading. Messrs. Loddiges may not commence this practice so early in the season as some others; but during the last summer their Orchidaceous house was shaded most effectually by nailing thick straw ropes on the outside of the house which was most exposed to the sun. These ropes were made, having a great number of straws projecting, and being nailed in a horizontal position along the roof at about fifteen or eighteen inches apart; the thickness of the rope, together with the great number of projecting straws permitted the rays of the sun to enter the house, but in such a soft and subdued form, as to appear to us to be one of the very best of all modes of shading.—ED

NOTES ON NURSERIES.

BY THE EDITOR.

Mr. Knight's, King's-road, Chelsea.—On entering the show houses of Mr. Knight, the first plant which among other splendid objects more than ordinarily arrested our attention, was a fine specimen of the magnificent Rhododendron arboreum, 20 feet in height, and coming splendidly into blossom. Whether we viewed the plant with reference to its well-proportioned growth, or the abundance, or individual attractiveness of its just opening blossoms, it excited our warmest admiration; more especially, as the kind in question has been pronounced other than a free flowerer. Besides the original

arboreum, with its deep crimson flowers, we noticed three other varieties in blossom; R. rubiniflora, of a bright rosy red colour; R. concolor, a delicate blush, and R. hartopiana, a mottled creamy pink, all very desirable kinds, and most probably hybrids between arboreum and some of the hardy species.

In the orchidaceous stove, but few kinds were in bloom, but the plants were in an exceedingly healthy and vigorous condition. Oncidium luridum, with its coppery flowers, and O. amplicatum were blooming freely. A plant of the splendid Ipomæa Horsfalliæ in this house was coming into flower, and is certainly a very desirable object. Whilst we bear willing testimony to the healthiness of Mr. Knight's orchideæ, we cannot refrain from noticing a practice which appeared to us very undesirable of imitation; that to which we refer is, that some of the specimens suspended from the roof are planted in little baskets formed of iron hoops. No doubt these hoops were found very convenient as far as regards the mechanical structure of the baskets: but as the oxidation of iron is known to be inimical to almost all vegetation, we think it fair to conclude that the tender and succulent roots of orchideæ would sustain injury in more than an ordinary degree, and we think the plants in question bear testimony to the correctness of this opinion; for whilst roots are to be observed protruding in abundance through the wooden baskets, we did not observe the same to be the case with reference to the iron ones-

In a small house, apparently devoted chiefly to propagation, a strong plant of Ipomœa Learii promises to be an object of admiration. In the same house we noticed Thunbergia lutes, with very large pale yellowish or buff flowers, and T. Bakerii with pure white blooms. The former, although destitute of the dark spot, which renders some of the others so attractive, is, nevertheless, very distinct and desirable.

In another house some plants were pointed out to us as a new species of Tropæolum imported from South America; they were of robust habit, and distinct in their appearance from those already in cultivation.

Having extended our notice to such length, we can only cursorily mention the stock of Camellias, and general stove and greenhouse plants; these are all in the healthiest condition, and afford proof that for all purposes of culture, small and low houses, with cleanliness and good order, are all that is required.

Mr. Catleugh's, Sloane-street.—Here we found an immense stock of Geraniums of all sizes, and in luxurious health. The appearance of these plants bear out the system of culture recommended by Mr. Catleugh, as quoted in the last number of this Magazine. Some seedling Calceolarias pointed out to us were very fine; and as Mr. C.

is in possession of Mr. Green's splendid assortment, a very fine bloom is anticipated. Mr. Catleugh informed us that in the month of May these latter, together with a quantity of his specimens and other Geraniums would be in blossom; and we can scarcely imagine a person who, judging from present appearances, could then feel himself otherwise than greatly gratified by seeing them.

Mr. Adams, King's Road.—Here are grown great numbers of Pinks, Hydrangeas, Roses, Lilacs, Azaleas, Hyacinths, Tulips, &c. for forcing. A show house, aided by these, in which were also Camellias, Rhododendrons, Heaths, and Geraniums, presented a showy appearance. A plant of Rhododendron Smithii, with dark rosy crimson flowers, and of Azalea Smithii coccinea, 3 feet in height, and covered with bloom, were truly splendid. Rhododendron Cunninghamii deserves notice, its flowers being of a lighter colour than Smithii; and a seedling, which has not previously flowered, promises to be an acquisition; its flowers are of a purplish crimson, and almost destitute of spotting. A rather large house is devoted to a very healthy stock of the free flowering kinds of Heaths; and others we noticed filled respectively with scarlet Geraniums and Heliotropes. of two long houses were filled with Geraniums; these plants were rather small, comparatively with Geraniums growing now-a-days: but otherwise extremely healthy.

Messrs. Loddiges, Hackney.—In the orchidaceous house, we noticed a fine plant of Acanthophippium bicolor, blooming profusely; besides the beauty and singularity which this has to recommend it, it possesses another equally desirable character, that of remaining several weeks in flower. There were a good many kinds in bloom, among which we thought the following most worthy of note:—Oncidium altissimum, Cattleya intermedia, Lælia cinnabarina, Zygopelatum crinitum cœruleum, and Cymbidium aloifolium.

The immense stock of Orchidaceous plants were in excellent condition, and for the most part in vigorous growth. Among the most interesting parts of this establishment, the collection of Palms and Ferns stand prominent; the magnificent grandeur of the former, and the peculiar structure and organization of the latter, being objects which the most casual and inattentive observer cannot pass altogether unheeded; whilst to the reflective mind they supply contemplations of the purest and most exalted character. The Camellia houses form another point of attraction; but here much of the beauty is lost to the visitor, in consequence of the great size and arrangement of the plants; they have, however, bloomed most splendidly, and in great profusion. The following kinds we noted down as possessing desirable qualities:—

Lactea Grunellii, cupped Allnuttii alba Nivalis, semi

Imbricata, light Knightii, anemone flowered Concolor, light Roseana, dark Rossii, bright Parthoniana, deep crimson Hosackii, deep rose Cumminghii, bright

Tricolor, dark striped

Sweetii Punctata Picturata, large

WHITE.

Fimbriata Alba simplex - plena

RED.

Douckelearii, blotched Florida, cupped Cardinalis, blotched Althœaflora, deep crimson Incomparable, single ditto Staminea, single red Triumphans, rose

STRIPED.

Imbricata alba Colvillii. Variagate simplex

In one of the houses, Lilium lancifolium and L. roseum planted out, had attained from two to three feet in height, and proportionably strong.

Messrs. Lowe and Co., Clapton .- Here we found a large and extensive stock of New Holland and other greenhouse plants; among the former are many seedlings which promise to be new and interesting. There are also a well grown collection of Heaths and Epacris, of various sizes. Among the Camellias, the following are very fine :- Pressii, Miniata, pink, Emma, white. Robertsiana was pointed out as quite new, with scarlet flowers; and we were told it had previously bloomed in Scotland. There was also another seedling Camellia which had bloomed this season, with light rose coloured flowers, of large size, and very double. We noticed a good stock of fine young plants of the new blue Lechanaultia, and Fuchsia corymbiflora also, a new Fuchsia, said to be imported, but which has not yet bloomed in this country. In habit it appears to resemble F. fulgens and corymbiflora, but is quite distinct in foliage. In one of the stoves a hybrid Gloxinia, with deep blue flowers, was in bloom, but did not strike us as being sufficiently distinct from G. speciosa and candida.

Mr. Fraser's Nursery, Lea Bridge Road.—We were particularly struck with the show of Camellias, Epacris, Rhododendron, Azalea. Dillwynia, Kennedya, Hovea, and similar plants, which were blooming profusely. We think we never saw Epacris growing so freely. or in such good keeping; the same may be said of the other greenhouse plants, of which there is an extensive and select collection. We were shown two or three hybrid Rhododendrons, which were just coming into flower: these, which have not bloomed before, are of very promising appearance, both in the foliage and flower buds. We noticed fine blooming specimens of Statice arborea, Pimelea incana, and hispida; and two beautiful specimens of Kennedya coccinea and glabrata.

- R. Barclay, Esq., Leyton.—Mr. Kyle, the gardener here, is an ardent admirer of the beauties of Flora, and also a very diligent and successful cultivator of plants; of which the beautiful specimens in his charge bear ample evidence. Fine plants of Bossicea cordata, Podolobium stauraphyllum, and heterophyllum, and Cytissus racemosus, deserve especial notice; as also Kennedya Manglesii, and Stirlingii, planted out, blooming in wild luxuriance; the former is bright blue, like Hovea celsii, but rather smaller; the latter a beautiful crimson; they are both plants of first rate qualities, and ought to be planted in every conservatory, which is not already too much crowded. We must not omit to mention a fine crop of Peaches, in a small house, which are doing remarkably well; the same applies to a vinery, where the vines are just coming into flower.
- J. Allcard, Esq., Stratford Green .- Here is a small Orchideæ House and a Fernery; in the former the plants are looking remarkably healthy, a due share being in blossom. The culture of the Ferns, seems to have particularly engaged the attention of Mr. Bevis, the gardener, as the numerous and finely grown specimens fully attest. Although Ferns do not display varied and beautiful blossoms like many other tribes of plants; yet they are not wanting in interest to the lover of plants, being for the most part evergreen, at least under good culture. A collection of them at all times and seasons forms a very perfect whole when viewed in a house by themselves; independently of this, they open a wide and most interesting field of investigation to the scientific botanist. We believe the fine collection of Mr. Allcard, is owing, in a great degree, to the enthusiasm of his gardener, who has originated vast quantities of plants by brushing over dried specimens from his own herbarium. The cultivation of Mamillarilæ and Echinocacteæ, is not here overlooked, there being a very excellent collection. One of the most interesting features, and one which we feel highly gratified to mention, is a new greenhouse in two divisions, erected on Mr. Paxton's ridge and furrow principle, and glazed with British sheet glass. On entering this house, the great superiority both of the design, and mode of glazing, is at once obvious, so full and free is the admission of light, that most powerful agent of vegetation; but it is not only the appearance of the houses, to the outward feelings and senses that constitute their recommendation, the state of the crops show decidedly enough the benefits of securing so large an admission of light. One division of the structure is filled

chiefly with Geraniums, and more healthy plants cannot be. The other. which is devoted to forcing, contains, besides Vines on the rafters, a nit in the centre, in which French beans are grown, and a healthier or more abundant crop it is impossible to conceive; we never saw beans flourishing in the open air in summer under the most favourable circumstances, that were superior to those growing in this house: by aid of an artificial temperature. The Vines and Strawberries are thriving most luxuriantly; and some Cucumbers planted out in the pit above-mentioned, though at a distance of three feet and upwards from the glass, are as stocky and vigorous as though they were within a few inches of the glass. Some of the advantages of this principle of building are the following: - A much more perfect admission of light and of the direct rays of the sun, both in the morning and afternoon, when they are most required; the retention of heat, there being no laps in the glass, and the decreased liability of breakage from atmospheric changes and other incidental causes, as the coldness of the past winter and the unprecedented warmth of March afford good evidence. The external appearance of houses erected on Mr. Paxton's principle, is in our opinion, superior to either those of a curvilinear or flat surfaced figure.

NOTICES OF NEW PLANTS.

CALIA FLORIBUNDA. The yellow Rei rei.

Bot. Reg.

NAT. ORD. BIGNONIACEÆ. § CRESCENTINEÆ. CLASS DIDYNAMIA
ANGIOSPERMIA.

A shrub from Madagascar, and consequently requiring the temperature of a stove. It is a stately plant, with a simple stem seven or eight feet high, which is covered with noble pennated leaves, at the top only. The flowers are of a bright yellow ochre colour, with a very pale border, and are produced on the old wood, just above the places where the leaves have fallen.

ARMERIA FASCICULATA. Fascicled Thrift.

Bot. Reg.

NAT. ORD. PLUMBAGINACE &. CLASS PENTANDRIA PENTAGYNIA.

A native of the warmer parts of Europe. It will thrive well in the open air during summer, but must be kept in a greenhouse in winter; it is a pretty plant looking like a young pine tree, and producing its heads of pink flowers in August. This species is known in some collections under the name of A. scabia.

TRIPTILION SPINOSUM. Spring Triptilion.

Bot. Reg.

NAT. ORD. COMPOSITE E. & LABIATE E. CLASS SYNGENESIA EQUALIS.

A most beautiful herbaceous plant from Chili, which has long been known to Botanists, but has never been introduced into this country, till seeds of it were lately received by Mr. Frost, at Dropmore, who gives the following account of it:—"The beautiful Triptilion I have now flowered three successive years. I have only been able to get two plants from seed, as it seeds very sparingly. The plant is herbaceous, with a root like that of a Dahlia in miniature; the radical leaves spring up in Autumn, as soon as the flowering stems are cut off but as they grow in Summer, they will have died off: the stems rise two feet high, and produce their flowers in corymbs. The plant has increased in size every year, but I have been too choice over it to make an attempt to divide the root, which I think might be done in Spring. I have kept the plant in a greenhouse while I have had it in my possession, but I think a cold pit would be a sufficient protection. After flowering, and when the stems are dead, I have generally reduced the ball of earth, and put it in a smaller pot for winter, and have shifted into larger, as circumstances required. I have used sandy loam, with a small portion of rotten leaves, and it grows beautifully till the time of flowering, when the leaves die off. Perhaps a colder situation would be more antiable for it."

CHYSIS BRACTESCENS. Bracteated Chysis.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. § EPIDENDREÆ. CLASS GYNANDRIA MONANDRIA.

The third of the genus now known, with large white flowers, and greatly inflated leafy bracts. It is a native of Mexico, and is a very fine plant.

IMPATIENS CANDIDA. White Balsam.

[Bot. Reg.

NAT. ORD. BALSAMINACEÆ. CLASS PENTANDRIA MONOGYNIA.

This fine annual is from the Himalayan Mountains, and therefore requires to be kept in the greenhouse, where it must be abundantly supplied with water. It grows about six feet high, with succulent bright green stems; the leaves are narrow and lanceolate, tapered to a fine point, and edged with fine crimson teeth. The flowers are large, showy, white, a little speckled with crimson, and are produced in succession during the autumn. It may be cultivated as a hardy annual, but it then loses all the delicacy and beauty which it had when grown under a glass.

HERBERTIA PULCHELLA, ET CŒRULEA. Pretty and Blue Herbertia.

[Bot. Mag.

NAT. ORD. IRIDACEÆ. CLASS HEXANDRIA MONOGYNIA.

Three varieties are here represented of this very handsome little plant, which is well worthy of a place in every collection. H. pulchella, is from Buenos Ayres, and H. cœrulea from Texas.

BOMAREA SIMPLEX. Simple Bomarea.

Bot. Mag.

NAT. ORD. AMARYLLIDACEÆ. SUB. ORD. HIPOXIDEÆ § ALSTREONIFORMES.

CLASS HEXANDRIA MONOGYNIA.

A handsome plant, with drooping purple spotted flowers, and acute subcordate leaves. It is perfectly hardy.

CROCUS SUAVEOLENS. Sweet Scented Crocus.

Bot. Mag.

NAT. ORD. IRIDACEE. CLASS TRIANDRIA MONOGYNIA.

A very beautiful sweet scented Italian Crocus, which is sufficiently hardy to bear our climate. "It is distinguished from C. imperatonius by the decided reticulation of the upper part of the inner vaginaceous coat; by the unvarying absence of the conspicuous bractea within the spathe, which seems constant in the latter, and the absence of purple stripes on the immature capsule, and the

stigmas are small and truncate, exceeding their anthers by their whole length, whereas those of imperatonius are usually more ragged and scarcely exceeding them."

CROCUS SPECIOSUS. Showy Crocus.

Bot. Mag.

NAT. ORD. IRIDACEÆ. CLASS TRIANDRIA MONOGYNIA.

A beautiful autumnal Crocus, with blue flowers, supposed to be from Tauria or Caucasus.

COBURGIA COCCINEA. Scarlet Coburgia.

Bot. Mag.

NAT. ORD. AMARYLLIDACEÆ. SUB ORD. AMARYLLIDEÆ. § PANCRATIFORMES.

CLASS TRIANDRIA MONOGYNIA.

A very beautiful plant, from the Cordilleras, where it was discovered by John Maclean, Esq., of Lima, and sent by him to Spofforth. The bulbs "were potted in rich alluvial soil with a little rotten manure, and throve well, standing out all the summer and autumn of 1839, the season being unusually wet and cold, but appeared to dislike sunshine and fine weather. At the approach of winter, the leaves perished, when pots were set dry in the greenhouse. Early in the spring both the bulbs flowered, the spathe having appeared while the bulbs were dry."

CALLITHAUMA VIRDIFLORUM, ET ANGUSTIFOLIUM. Green-flowered and narrow-leaved Callithauma. [Bot. Mag.

NAT ORD. AMARYLLIDACEÆ SUB. ORD. AMARYLLIDEÆ § PANCRATIFORMES. CLASS
HEXANDRIA MONOGYNIA.

The first is a plant which has excited much curiosity, from its being stated in the "Flora Peruviana," to have large and beautiful emerald-green flowers on a stalk as tall as a man.—It was sent by Mr. Macleau, to Spofforth, where it has flowered; but having very little fibre, did not grow more than a foot high, therefore, it is at present questionable, whether it attains the size stated. The second species has a smaller bulb, and much narrower leaves, and the flowers considerably smaller.

COBURGIA TRICHROMA. Three-coloured Coburgia.

Bot. Mag.

NAT. ORD. AMARYLLIDACEÆ SAB. ORD. AMARYLLIDEÆ § PANCRATIFORMES. CLASS HEXANDRIA MONOGYNIA.

A very handsome species, with scarlet flowers, the segments of which have a white margin, and a green stripe runs along the centre.

ODONTOGLOSSUM GRANDA. Magnificent Tooth tongue. [Paxton's Mag.

NAT. ORD. ORCHIDACE E. CLASS GYNANDRIA MONANDRIA.

A most magnificent plant from Guatamala, which is in several collections, but has not yet flowered in any except those of Knypersley and Chatsworth. It is strictly epiphytal, thriving best on a log of wood suspended in a shady part of the house, in a temperature of from 60 to 70 deg; and dryness and moderate temperature are desirable in winter. Mr. Paxton says, "From five to six inches is the usual breadth of the flower; from the tip of each petal the sepals are mottled and barred like the back of a tiger, the crown of the petals is of that rich, smooth, shining character, as to appear an artificial preparation; the lip resembles the upper portion of a cockle shell, its figure is most delicately stained, and when held to a lamp, exhibits a glittening transparency of texture, for which other orchidaceous flowers are so remarkable; while perhaps the most pleasing part of all is the splendidly mottled tubercles at the base of the lip."

REVIEWS.

The Sentiment of Flowers. London, ROBERT TYAS, Paternoster Row; J. MENZIES, Edinburgh; MACHEN and Co. Dublin. New and enlarged edition, profusely illustrated with coloured plates, in monthly parts, price 1s. each.

Parts 1, 2, and 3 are now before us. The plates which contain from 7 to 12 drawings of flowers in each number, are beautifully executed, the paper and letter-press are also superior, and when completed (and it is intended to be so in twenty parts), it will be a most interesting and beautiful drawing-room book, and will contain nearly three hundred exquisitely coloured figures of flowers, chiefly our native plants, with which most persons are more or less familiar.

The quotations, both prose and verse, are numerous and judiciously made, and may be perused with equal profit and pleasure.

We cannot, however, subscribe to the sentiment contained in the first two lines of the introduction, where we are told, that "Of flowers, so much has been said and sung, that it were impossible to write any thing new." Notwithstanding all that has been said and sung, we believe there a few new things said in these numbers, and many more new things may still be said. It is observed, that of all the minor creations of God, they (flowers) seem to be most completely the effusions of his love, beauty, grace, and joy.

In the first number we have a list of flowers, constituting what is

termed a Diai of Flowers,					
TIME OF OPENING.	н.	М.	TIME OF CLOSING.	н.	M.
Yellow Goats' beard	3	5	Helminthia echioides	12	0
Pale flowering Dandelion	4	0	Agathyrsus alpinus	12	0
Bristley Helminthia	4	5	Borkhausia alpina	12	1
Alpina Borkhausia	4	5	Leontodon serotinus	12	0
Wild succory	4	5	Malva Caroliniana	1	0
Naked stalked poppy	5	0	Dianthus proliferus	1	0
Copper coloured day lily	5	0	Hieraceum pilosella	2	0
Smooth sow thistle	5	0	Anagallis arvensis	3	0
Alpine agathyrsus	5	0	Arenaria purpurea	2	3
Small bindweed	5	6	Calendula arvensis	3	0
Common nipple wort	5	6	Tagetes erecta	3	4
Spotted achyrophorus	6	7	Convolvulus arvensis	4	5
White water lily	7	0	Achyrophorus maculatus	4	5
Garden lettuce	7	0	Nymphæa aloa	3	0
African marygold	7	0	Papaver nudicaule	7	0
	7	8	Hemerocaulis fulva	7	8
Common pimpernell	8	_	Cichorum Intybus	8	9
Mouse ear hawkweed	0	v	Cichol will Industry of the Control		

TIME OF OPENING.	н.	M.	TIME OF CLOSING.	н.	М.
Proliferous pink	8	0	Leontodon taraxacum	8	9
Field marygold	9	0	Tragopogon pratensis	9	10
Purple land wort	9	10	Stellaria media	9	10
Small purslane	9	10	Lapsana communis	10	0
Creeping mallow	9	10	Lactua sativa	10	0
Chickweed	9	10	Sonchus lævis	'n	12
			Portulaca oleracea	11	12

In allusion to this Dial, there are annexed some beautifully appropriate verses.

And thou, " wee crimson tipped flower," Gatherest thy fringed mantle round, Thy bosom, at the closing hour, When night drops bathe the turfy ground.

Oh! let us live, so that flower by flower, Shutting in turn may leave A lingerer still, for the sun set hour,

A charm for the shaded eve.

Young Joy ne'er thought of counting hours. 'Till Care, one summer's morning, Set up among his smiling flowers, A Dial by way of warning.

We are told that the language of flowers is by no means of modern Lady Montague was one of the first to introduce it into "When at Pera, she sent a Turkish love-letter to a friend in England, from which we extract the botanical emblems.

Clove. You are as slender as the Clove! You are an unblown Rose!

I have long loved you, and you have not known it!

Have pity on my passion! Jonauil. Pear. Give me some hope!

A Rose. May you be pleased, and your sorrows mine!

A Straw. Suffer me to be your slave! But my fortune is yours! Cinnamon. Send me an answer!

And it is said thus it is possible to quarrel, reproach, or send letters of passion, friendship, or civility, or even of news, without ever inking the fingers. With respect to the language of flowers. we are told that "little study" is necessary, in the science here taught nature has been before us. It will suffice that two or three rules be given which the reader will do well first to learn, and by reference to the which, if systematically arranged for the purpose, he will be enabled to converse in the language of flowers. By the first rule, a flower presented inclining to the right, expresses a thought; reversed, it is understood to convey the contrary of that sentiment. For example, a rose bud, with its thorns and leaves, is understood to say "I fear, but I hope." The same rose bud reversed, would signify "that

Pepper.

you must neither fear, nor hope." You may convey your sentiments very well by a single flower. As the second rule, take the rose bud which has already served us as an example, and strip it of its thorns, it tells you that "there is every thing to hope"; strip it of its leaves, it will express that "there is every thing to fear."

The expression of nearly all flowers may be varied by changing their position: thus the marygold for example, placed upon the head, signifies "distress of mind"; upon the heart "the pains of love"; upon the breast, "ennui." It is also necessary to know that the pronoun "I" is understood by inclining the flower to the right, and the pronoun "those" by inclining it to the left.

The flowers figured in this very elegant book are all represented as emblematical of some sentiment.

blematical of some sentiment.

For Absence, we have Wormwood;

Accommodating, Red Valerian; Activity, Thime;

Afterthought, Michaelmas Daisy.

The class and order, natural and artificial, are also given to each

plant, together with a botanical description.

The Sentiment of Flowers, when complete, will be a most splendid book of its class, conveying a large store of botanical information, and a delightful medium by which to acquire a familiar acquaintance with a great number of plants, their history, and the most interesting anecdotes connected with them. This knowledge is the more valuable, inasmuch as the plants figured and described consist chiefly of those species of which every person is supposed to know something.

T. JACKSON, Nursery and Seedsman, Kingston, Surrey.

A most creditable Catalogue, containing select and extensive assortments of stove, greenhouse, choice, hardy, ornamental shrubs and trees, roses, and hardy herbaceous plants; with a list of Heart's-ease. The whole priced. Mr. Jackson is amongst the most successful cultivators of Heaths, and generally carries off some of the principal prizes during the summer exhibitions.

MISCELLANIES.

At Mr. Pamplin's Nursery, Lea Bridge Road, are a considerable quantity of seedling Calceolarias, of very promising appearance. They are from seed of some of the best kinds in cultivation, and are very decided in their character. They have been kept in a pit in front of one of the greenhouses, and are consequently in a very robust and vigorous state of growth. They will many of them be shortly in flower.

Statice arborea has been grown very successfully in a temperature ranging about 55 degrees, potted in equal portions of loam, peat, and sand; it will thrive vigorously, if it is shifted when its roots are becoming plentiful, affording it very abundant and ample drainage; growing in its native habitats, surrounded on all sides by the ocean, would seem to furnish a hint that water, impregnated with saline particles, would be of great importance in its artificial treatment; and if it could be placed within the influence of evaporation from water of this kind, there are some grounds for supposing that much benefit would follow. Those who have the plant under their charge, would do well to institute a series of experiments on these points.

Much of the beauty of plants in many collections is lost, in consequence of the ill-judged mode of tying them up; it too often happening that valuable plants are tied into a thick faggot-like bundle, instead of its being made an operation of taste, on which the beauty of the plant mainly depends. This arises from a want of discrimination in affording support to plants which, under artificial treatment are dependent on man for all their wants. It ought to be constantly borne in mind, that no plant should be tied which does not absolutely require it; that tying, whenever resorted to, except in the case of climbing plants, should be simply to assist the natural habit of the plant; and that every stake should be removed as soon as the shoot it supported is capable of retaining its position without such assistance.

One of the most ornamental greenhouse plants which have been introduced within the last few years is the Siphocampylus bicolor; when once it has attained to any size, it is constantly in blossom, continuing to grow and bloom even in the depth of winter; it is also very easy of cultivation, growing freely in loamy soil, moderately enriched. The plants should be frequently stopped whilst young, in order that they may become bushy; and after a sufficient number of branches are obtained, they should be allowed to grow uninterrupted, as they bloom much better than when stopped after they are so far advanced. It is a very ornamental object for the flower garden, especially when planted out in the pot, as this tends to check any luxuriance that it might otherwise be inclined to exhibit, and induces a disposition to flower more freely. It will not bear any amount of frost-

A plant of Liparia Sphærica is blooming in the greenhouse of J. Lister, Esq., Upton, under the skilful management of Mr. Milne. This plant, which is six or eight feet in height, has bloomed for these two or three years past. At the same place is growing, one of the seven largest trees of the Cedar of Lebanon in this country, a majestic monument of antiquity: it is still in a healthy and vigorous condition.

As the season of flower garden planting has arrived, it may not be altogether without its use to direct attention to the manner of performing this operation, Mr Loudon has recommended circular beds to be adopted in almost all cases, varying their size and situation according to taste and other circumstances. Such beds have a more complete appearance when planted, in consequence of there being no irregular corners to fill out, which it is often a matter of some difficulty to accomplish. As far as regards the mode of planting, the arrangement of the plants, in zones of different forms and colours, has a very pleasing effect, and for the sake of variety, is preferable to the mode of planting en masse. As an instance, suppose a bed to be planted in the centre with a strong plant of Fuchsia fulgens; around this let there be a zone of Lotus Jacobæus, and on the edge another zone of Lobelia cœrulea; here the individual beauty of each is heightened by the contrast, of form and colour; whilst there is a sufficient harmony in the whole to produce the effect which is desired, namely, a gorgeous combination and display of beauty. In another case, the disposition of the plants may be varied so as to produce a centre with convergent rays. Thus the centre might be planted with Zinnia elegans, in a broad patch. From this to near the edge, the converging rays may be Clarkia pulchella; the spaces between these filled with Œnothera Drummondii, and the edge Kaulfussia amelloides. In some cases, the rays might be produced by training Thunbergias on a temporary trellis, or any similar plants, around the edge.

The temperature which is most favourable to plants in the natural state, is most likely to agree in an artificial one; the practice of sustaining a temperature nearly uniform, is not the proper method of treating plants; a diurnal season of rest being as necessary to a plant as to an animal-neither can be constantly under the same exciting power of heat without injury, as is obvious from the enervated and unhealthy state of stove plants when an equable heat is attempted. In such cases, where plants are submitted to such a degree of heat as to keep them constantly growing, they are sure to become exhausted, sickly, and etiolated. It has been shewn by vegetable physiologists, that the leaves of plants do not perform the same functions in the dark as in the light, and that a rise of temperature has a sensible effect on their organs of respiration. If the air be allowed to cool in the night, it will generally deposit a portion of vapour on the plants; if it be kept warm it will, on the contrary, in consequence of respiration, tend to exhaust them of moisture, and as the leaves of plants absorb oxygen and moisture in the night, and give out a portion of this oxygen in the day, when exposed to the light of the sun, we may infer that both light and heat, the exciting causes of the operation of the day functions, should be less powerful in the night. A view of the provisions of our all-wise Creator will tend to confirm this opinion. Nowhere within the limits of vegetation, is the heat equally powerful in the night as in the day. In a stove for plants of the torrid zone, it is desirable to know the mean noon day heat of the coldest month, and the mean night heat of the same period, at some place within the tropics where it is known to be most favourable to the vegetation of plants of that zone. It will also be requisite to know the mean noon-day heat of the hottest month, and also the mean night heat of the same time, in order to regulate for the summer temperature. The mean temperature of the year is of little use in this enquiry, because our object is to ascertain the change of temperature most conducive to the well being of plants, and the lowest temperature to which they may be safely exposed, under the impression that the author of life would have provided them an uniform heat if it had either been necessary or useful.-Tredgold on Warming Buildings.

The timber of the Lime Tree is very serviceable, and much preferable to that of the Willow, being stronger, yet lighter. Because of its colour, which is of a pale yellow or white, and its easy working, and not being liable to split, Architects form with it their models for buildings. The most elegant use to which it is applied is for carving, not only for small figures, but large statutes, in basso and alto relievo, as witness the stoning of St. Stephen, with the structures and elevations about it; the trophies, festoons, fruitages, friezes, capitals, pedestals, and other decorations, about the choir of St. Paul's. It is even supposed by some, that the blocks employed by Holbein for wood engravings, were of this tree. Dodsley says:—

Smooth Linden best obeys
The carver's chisel; best his curious work
Displays, in all its nicest touches.

It is also used by piano forte makers, for sounding boards; and baskets, and cradles are made with the twigs of the Lime.—Woodland Gleanings.

We have lately seen a very interesting adaptation of the well-known fact, of the various kinds of Cactus and Epiphyllum growing freely when grafted on Pereskia aculeata. This plant, which is of rapid growth, almost approaching a climbing habit, was, in the case alluded to, trained over the pathway in a Conservatory, among other climbing plants. In this situation, it had been grafted, in several places, with Epiphyllum speciosum, and truncatum, and Cereus flagelliformis, which were growing freely, and producing flowers in abundance. The stem of the Pereskia being hidden by the other plants, would almost have induced one to fancy that the Cactuses were entirely living on air; and although a little penetration would, of course, convince a person of his error in this supposition, it did not at all lessen the effect produced by their appearance in this situation.

At W. Leaf's, Esq., Streatham, are two fine plants of Rosa Banksæa Lutea, which flower very freely; the plants are nearly 20 feet in height, forming a head 12 feet in diameter, from which the shoots hang gracefully pendant, covered with bunches of their beautiful yellow flowers; the plants are growing at either end of a curvilinear roofed Conservatory; and in company with a splendid plant of Accacia pubescens, present a coup d'ail at once striking and beautiful.

Wistaria Sinensis, trained along the top of a span-roofed house, at Messrs. Chandler's, Vauxhall, is flowering in great profusion. This truly beautiful climber is not cultivated half so much as its merits deserve, as it flowers freely on an open wall, and is of rapid growth, when once it becomes established—April 20.

As Conservatory climbers, Clematis azurea grandiflora and C. sieboldii deserve especial recommendation; they both grow and flower freely, requiring only good rich loamy soil, and plenty of room to extend their branches; their blossoms are very handsome, and are produced in abundance. Notwithstanding that both species are hardy, and succeed well in the open air, they deserve very extensive cultivation in Conservatories, especially if grown in a position to enjoy a due share of light, in which case they flower more abundantly.

[&]quot;The mode I should recommend for its successful cultivation (Oncidium) is that the greater portion of the species be grown in large pots, filled up to within about two inches of the top, with pieces of bark and potsherds, and over the potsherds should be laid about one inch thick of the roots of the common eagle

fern, and thin pieces of bark and very turfy peat, till the pot is filled up, about two inches above the rim. Then place the plant in the centre, and finish it neatly off with fibrous turf. The best time to pot this genus is when the plants commence making roots; for if they are potted before that time, or after they have made their roots, they are apt to shrivel, and will sometimes damp off, nnless great care is taken in giving them water; but when charged as I have recommended, there is not the slightest fear of their either damping or shrivelling,"—Florist's Magazine.

In the Gardener's Magazine vitriol is recommended for destroying the American blight, by mixing about seven parts of water to one of vitriol, according to the strength of the vitriol, and rubbing it well into the crevices of the bark, wherever the blight appears.

The true Coburgias are shy flowerers with us, and also in their native country, having a great disposition to waste their strength in producing offsetts. They like strong alluvial and manured soil, and are often found wild on inaccessible rocks, on the edge of a precipice, and sometimes deeply imbedded in the drift soil.

Without order, nothing of value is to be obtained in this world; but with it much may be done with the most straightened means. A gardener, incapable of an orderly arrangement of his ideas and intentions, will, in his various undertakings, be always in confusion; he will continue his operations at random, without any definite reason, and, in a majority of instances, accident or unforeseen events will put an end to his expectations. But an orderly and reflecting gardener, will arrange and systematize his ideas; before he proceeds to any one operation, he will consider the means he has of undertaking the task, and will arrange these means in the best way for effecting the desired end.

As I have been successful in blooming several of the genus (Cyrtopodium,) I send you particulars of the method by which I have succeeded. As soon as I perceive the bnds springing at the bottom of the pseudo-bulbs, I take the plants and carefully shake off all the old soil, and cut off all the decayed roots. I then pot them in large pots, well drained, in a compost of turfy loam, chopped into pieces about the size of pigeon eggs, and peaty turf broken in the same manner, and leaf mould about half rotten, in equal parts, to which I add about an eighth of bones, also broken into small pieces. I mix them all well together, and place the plants as near as possible level with the rims of the pots, and finish by giving a good watering to settle the compost. The plants are put in the warmest part of the honse, and watered very moderately at first, increasing the quantity as the plants advance in growth until the leaves are fully developed, when I give them manure water once a week to encourage the production of strong pseudo-bulbs, without which it is in vain to look for flowers. In this I succeeded to my satisfaction, and last year had the pleasure to perceive the flower stems appearing at the same time as the bulb shoots. I had flower stems five feet high, with namerous side branches, making a bundle of flower stems on one shoot more than eighteen inches in diameter. As soon as the pseudo.bnlbsfare perfected, I gradually reduce the water, and when they are at rest I give them no more. To induce perfect quiescence, I have them removed to a cool dry house, the average temperature of which is about 55 degrees .- Appleby, in the Bot, Reg.

GRAFTING THE ORANGE .- A Subscriber at page 263 of the present volume wishes to be informed which is the best way to work Orange Trees, whether by grafting, budding, or inarching, to which I would reply, that circumstances might render each of these modes preferable in certain cases. In illustration of this, I will suppose your Correspondent to be already in possession of one or more large trees, and that his object is simply to increase his stock. In this case I should recommend him to have recourse to the process of inarching, as the readiest means of obtaining strong and vigorous plants. If a few plants only were in requisition, these might be obtained by inarching branches of any moderate size, being proportioned to the strength and capacity of the stocks on which it was desired to work them. If, on the other hand, the object in this case were supposed to be propagation in an extended sense, this might be accomplished with equal facility, by inarching smaller shoots in greater abundance, using, of course, stocks of an adequate degree of strength. Should it happen, however, that your Correspondent is not in possession of such a tree, but that a few grafts obtainable from some friend are the only means of propagation within his reach, it may be gratifying to him to learn that, with nearly an equal degree of certainty, they may be made available to produce the desired effect. All that is necessary in this case, being carefully to ingraft them on his stocks, taking care that their extremity is either immersed in a phial of water suspended under them, or stuck into a potato. If, however, in this latter case the object is extended multiplication, your Correspondent may have recourse to budding, as by this means he will obviously be enabled to make several plants in place of one, if grafting were adopted. Budding would also be preferable if your Correspondent is in possession of any new or valuable kind, which, for lucrative purposes, he might wish to propagate very extensively. As regards the proper season for performing these operations, I should say, that any time except the depth of winter might be chosen with tolerable certainty of success; but if any season is preferable to another, I should be inclined to say that the early spring months are most desirable. A steady temperature of from fifty-five degrees to sixty degrees, and a damp and calm atmosphere are most conducive to a quick and lively union; and for these, among other reasons, a small north aspected house or frame should be devoted, if possible, to such operations. Your Correspondent will find abundance of information on the mode of performing the operations in question, together with every particular of treatment in the various periodical and standard publications of the day. Your Correspondent further inquires if soap suds would prove injurious in watering plants, seeing it recommended, as he says, to water vegetables with. Now, I would respectfully ask your Correspondent if the term "Vegetable," taken in the sense he means, does not imply "Plants," as I should certainly take his expression to mean, that he has seen soap suds recommended as desirable to water the culinary plants cultivated in kitchen gardens. If I am correct in supposing him to mean thus, I should further suppose him to be only seeking some additional evidence in favour of "A Yorkshire Farmer's" recommendation, and in this case I can assure him that soap suds, in consequence of the alkaline properties contained in it, acts as a powerful stimulant wherever it may be applied; but as it is possible that your Correspondent's question refers to potted plants, although that is not expressed, I should, in that case, say that soap suds would follow the same rule as all other liquid manures, namely, that it would be beneficial if used occasionally, and in moderation, during those seasons in which the plants watered therewith were in a state of progression and growth; but that at all other times, its application would not be attended with any marked beneficial result .- T. MOORE.

MONTHLY CALENDAR.

FLOWER GARDEN.-Sow annuals for a succession, and transplant such as have been raised under glasses, if they have been previously well hardened; but they should by no means be turned out, unless this has been attended to. Plant out geraniums, salvias, fuchsias, and all other plants intended to form beds and summer ornaments for the flower garden, and take off the buds of such as show a disposition to flower early and are weak: due attention to this will do much towards ensuring a good summer display. Plant out gladioluses early in the month, (p 160,) and at the end of the month, bouvardias in the American border. (p. 67). Sow cynoglossum, glochidiatum, (p. 255,) and all kinds of biennials for next year. Propagate by cuttings wall-flowers, rockets, and other herbaceous plants. Carefully attend to tulip beds, (p. 123,) and protect other florist's flowers from the sun, rain, and wind. Hoe, rake, and clear off leaves and rubbish, being careful to stir the surface of the ground about annuals and choice herbaceous plants, wherever the rain has rendered it hard. Thin annuals that have been sown in the open ground, and water and shade them and other plants when the weather is hot and dry. Destroy insects on roses, (p. 22.) and carefully pick grubs off them. Train climbing plants as they grow. Roll, scrape, and weed gravel walks, and remove weeds and spurious grasses from lawns, (p. 198).

PLANT STOVE.—Attend to all plants as they show a tendency to grow, potting such as require it, and any that do not, will require to have their roots inspected, and the drainage of the pot attended to; compactness of the soil, or parting from the pot must be remedied. A higher temperature, and constantly moist atmosphere must now be maintained, and many of the plants will be benefitted by being plunged in fermenting bark. The application of dung heat is highly beneficial to some kinds, especially the smaller kinds of cacti, when in a growing state, (p. 141). Set amancæs in the stove, (p. 236,) and remove dead leaves and other unsightly objects.

GREENHOUSE.—Too much air cannot be admitted at this season. Leave some of the sashes open all night about the middle of the month. For other directions, see Calendar for April. Put in cuttings of cineraria, (p. 181,). Layer polygala grandiflora, (p. 35).

Park and Plantations.—Evergreens may yet be planted if the weather is moist, but it should be done early in the month. Sow the seeds of evergreens and deciduous shrubs, if not previously done. Fell oak and all kinds of barking trees. Prepare ground for planting, and attend to newly planted ground, keeping it free from weeds wherever practicable. Operations of all kinds on ground or water should now be carried on, as well as buildings. This is considered by some to be a good season for pruning oaks.

KITCHEN AND FRUIT GARDEN.—Sow peas and beans, in successon; kidney beans in the first week, and complete planting potatoes as soon as possible. Sow brocoli, Brussels sprouts, &c. for a late crop; and about the middle of the month, cauliflower, for autumn use; also carrots for late drawing, and spinech, lettuce, radishes, and small sallad every fortnight. Transplant, earth up, stake peas, top beans, and perform other operations, as thinning, weeding, hoeing, &c. as circumstances may require. Water in dry weather, and protect early sown or transplanted French beans from frost.

FORCING DEPARTMENT.—Increase of temperature, and abundance of moisture will now be requisite in the different departments of the pine stove, (pp. 7 and 35). Prepare hotbeds for melons and cucumbers, and ridges for them in the open air. Attend to air, watering, and destroying insects. For directions for the peach house and vinery, see Calendar for April.

GENERAL INDEX

TO VOL. V.

A.

OR	GINAL C	OMMUNIC	CATIONS.			
						PAGE.
Ayrshire Rose, Its uses and			ns	• •	••	145
Alpine plants, their culture a	nd prote	ction	• •	••	• •	202
Arboretum at Derby	**	••	• •	• •	• •	146
Alton Towers, the seat of th				• •	• •	147
Aston Hall, at Birmingham,			atts, Esq.	••	• •	148
Apples, A selection of, for a			••	• •	• •	150
Apple Trees, A method of ol					• •	223
Air, Mr. Penn's method of w	arming a	and circu	lating, in	hothouses	s <u>16</u>	9, 252
N	OTICES O	F NEW F	LANTS.			
Arctostaphyllos nitida			• •	••		20
Angelonia cornigera			••	• •		209
Aganisia pulchella		• •		• •		46
Arundinia Bambusæfolia					• •	210
Abutilon vitifolium				• •		69
Acanthostachys strobilacea						235
Aconitum ovatum		٠	••			70
chinense						233
Aquilegia glauca						89
Acacia urophylla						259
oxycedrus						90
platyplera		• •				210
biflora		••			• •	235
Aporum leonis						91
sinuatum						210
cuspidatum		• • •		• •	• • •	210
Allium cœruleum		• •		• •	• •	110
Aquilegia fragrans	••		••	• •	•••	112
pubiflora						112
Azalea splendens	••					253
Danielsianum						254
lateritia						254
florabunda						254
angustifolia		• • •	• • •			254
grandiflorum		•••	•••			254
spottiulatum						254
pulchium	::		•	• • •		254
ignescens	••	••	••,	•••	• • • • • • • • • • • • • • • • • • • •	254
luteum	••	••	••	••	•••	254
flore pleno	••	••	••	••		254
Anchusa petiolata	••	••	••	••	••	256
Anagallis alternifolia	••	• •	••	••	••	112
	••	••	••	••	• •	113
Angræcum bilobum gladifolium	••	••	• •	• •	••	183
Asterotrichion sidoides	••	• • •	• •	••	••	235
Agave Americana, var.	••	• •	••	• •		133

GENERAL INDEX.

						PAGE.
Æschynanthus grandiflorus	••	••	••	••	••	208
Armeria fasciculata	••	••	• •	••	21	1, 277
	MISCEI	LLANIES.				
Aphides, their ravages on Ro	ses and th	he hest tin	ne to nre	vent them		21
Agave Americana, Notice of						141
Its History			_			134
Arnott's Stove, its suitability			Greenho	neee	190	0, 166
				usca		142
Association of Gardeners, for Arboretum, at Derby			••	••		142
Apples, the difference of flavor	**	ood her So	ile	••	••	163
		med by Sc	1118	••	••	164
Apple, Notice of a large Aloe, Treatment of the genus,	mith cono	eiel wefer	 	Watering	••	190
Notice of a New Hybrid	with espe				••	261
Alstræmerias, to raise them fi		• •	••	••	••	262
		· · ·		••	••	286
American Blight, Vitriol recon			ing	••	••	286
A Gardener, necessity of order	riy arrange	mentin	• •	••	••	400
	F	3.				
ORIG	GINAL COM	MUNICAT	IONS.			
						33
Boronia, the Cultivation of		••	••	••	••	83
Buckingham Palace, the Gard		••	••	••	••	101
Botanical Gardens, Gravesend	,	••	••	••	••	104
Belfast		••	• •	• •	••	175
Borders for Vines, the Format			••	••	••	228
Blight, Its Cause, Effects, and			• •	• •	••	178
Brugmansia aurea, Cultivatio		••	••	• •	••	199
		••	••	• •	••	
Baronia serrulata, on the Cult	ivation of	• •	••	••	••	270
NOT	CES OF	NEW PLAN	NTS.			
Berberis empetrifolia				••		17
Brassia verrucosa	••		••	••		19
Lawrenceana	••		••	••	210	, 255
Bouvardia angustifolia						45
triphylla var. splen	-	••	••		••	67
Brassavola venosa				••		66
glauca	••	••	••	••	••	88
Bignonia Tweediana	••					89
Bletia secunda	••			••		90
Brachycome Iberidifolia		::			113	, 232
Batatas betacea	. ,	•••	::	•••		135
Bonariensis	••				••	256
Betula bhojpattra	•••		••		••	139
Brunonia australis	•••					156
Barringtonia racemosa	•••	••	::			158
Blandfordia grandiflora			••			159
Bolbophyllum sordidum				••		187
Bolbophyllum limbatum		••	••		::	140
Begonia punctata	••		••	••		235
Burlingtonia rigida		.,		•••		236
Bomarea simplex			••			278
- care ou simpion	••	••	••	••	••	4.0
	MISCEL	LANIES.				
Bees, their propensity for War	•••	••	• •	••	• •	23
Berberis, Root Grafting of		••	••	••	• •	48
Botanical Society, Inner Circle	e, Regent's	s Park		••	• •	92
Report expl					he	
Gardens	of	• •	••			94
Bone Dust, Advantages of, in l	Planting	••	••	• •	• •	212
Brachycome iberidifolia, Obser	vatic ns on	1	• •	••		237

GENERAL INDEX.

PAGE.

Bananas, Successful Cultiva Botanical Dictionary, Paxto		ed.	••	••	••	263 114
20002000 20000000, 2 00000	_ 0, 10.10	C.	••	•••	• •	
	IGINAL CO					
Cereus flagelliformis, Cultiva	ation of, ar	d grafting	on Per	iskia	••	32
Callistachys, Cultivation of	:	••	• •	• •	• •	199
Cedrus Deodora, Propagation		uttings	• •	••	••	37
Camellia, Culture of	••	••	••	••	• •	38
Grafting the	••	••	••	••	• •	42
Budding Clematis Sieboldii, Culture	nd Hardiy	· · ·	••	••	••	54
Cucumbers, the Cultivation			••	••	8	1, 106
Cobea Scandens, Remarks		*********	••	::	•••	100
Cemetery, at Gravesend		•••	::		::	102
Cape Heaths, Winter Treatr				••	••	130
Chatsworth, the seat of the				••	•••	132
Cherries, Selection of, for a S			••	• •	• •	152
Currants do.	lo.		• •	••	• •	153
Circulation of Air in Hotho	uses		• •	••	• •	169
Cycas revoluta, Cultivation	of, and Re	marks on	• •	• •	••	204
Cineraria, Cultivation of the	Genus		• •	• •	• •	181
N	OTICES OF	NEW PLA	NTS.			
Cymbidium pendulum						17
pubescens	••	••	••	••	••	140
Calostemma corneum	••	••	••	••	••	17
Centaurea pulchra	••	••	••	••	•••	18
Correa Harrisii	••			•••		19
longiflora			••	• • •		138
Catleya labiata var. atropurp		••	••	•••		18
var. mossice				~		136
Aclandiæ	••	••			••	89
Cleisostoma maculosa	••	• •	••	••	• •	19
latifolia	••			• •	• •	91
Cyclogyne canescens	••	••		• •	19	, 138
Camellia Spofforthia	••	••	• •	••	• •	23
Cereus latifrons	••	••	• •	••	• •	89
speciosissimus var. h	ybridus	••	• •	• •		109
Clematis Sieboldii	••	••	• •	••	• •	54
montana	••	••	••	••	••	111
Cirrhopetalum picturatum	••	• •	••	• •	••	68
auratum	••	••	• •	••	••	69
vaginatum	••	••	••	• •	• •	140
Chesia leria	••	••	• •	••	• •	70
Chysis lævis bractescens	••	••	••	••	••	91
Catasetum integerrimum	••	••	••	••	••	91 110
monachapthus	••	••	••	••	••	112
myanthus	••	••	••	••	••	112
trulla		••	••	••	••	140
succatum	•••	::	::		• • • • • • • • • • • • • • • • • • • •	140
cornutum			••		::	140
cullosum	••	••	••	••	•••	140
maculatum	••	••		••	•••	157
deltoideum	••	••	••	••		160
Cynoglossum longiflorum	••	••		••	••	110
glochidiatum	••	••	• •		••	255
Cœlogyne Cumingii	••	• •	••	• •	••	140
cristata	••	• •	••	••	••	258
Comparettia rosea			••	• •	••	140

Calanthe discolor						PAGE.
Calectasia cyanea	••	••	••	••	• •	135
Cyrtochilum maculatum var.	ecornut	nm · ·	••	••	••	158 159
Convolvulus floridus	••		••	••	•••	186
verrucipes	••				• • • • • • • • • • • • • • • • • • • •	258
Chelone Lyonii	••	••		••	••	209
Clianthus carneus	••	• •	• •	••		210
Cyrtopodium Andersonii	••	••	••	• •	••	232
Cychnoches Loddigesii var. le	eucochil	um	••	••	• •	255
Callistachys longifolia Citrus deliciosa	••	••	••	• •	• •	257
Columnea Scheidiana	••	••	••		••	258
Coryanthes speciosa alba	••	••	••	••	• •	258
Calia floribunda	••	••	••	••	••	46 277
Chysis Bractescens	••	••	••	••	••	278
Crocus suaveolens	•••	• • • • • • • • • • • • • • • • • • • •	••	•••	• •	278
speciosus	••		••	••	••	279
Coburghia coccinea		••	•••	•••	• • • • • • • • • • • • • • • • • • • •	279
Callithauma virdiflorum et a	ngustifol	lum	••	••		279
Coburghia trichroma	••	• •	••	••	••	279
	R	EVIEW.				
Cemetery interment						100
cometery interment	••	••	••	••	• •	188
		ELLANIES	•			
Cacti, Remarks on Hybridizi			••			20
Description of a Pit fo	r the Gr	owth of			••	141
Growing with dung he	at recon	mended		• •	• •	141
Essay, on the Cultivat	ion of	• •	• •	• •	• •	142
Camellia Spofforthia, Descrip	tion of					23
Caternillars Method of Door	rence of		Wood and	d Metal	• •	23
Caterpillars, Method of Destr China, Extract of a Letter fr	oying	• •	• •	••	• •	46
Cytissus, Propagation of, by	Root Gr	afting	••	••	• •	47
Crategus, do.	••	arring	••	••	• •	48 48
Coniferous Plants, Successful	Method	of raising	r from Se	ed .	••	48
Calendar, Suggestions for a M	Ionthly	••	, nom oc		• • • • • • • • • • • • • • • • • • • •	144
Monthly			167.	192, 215,		
Clover, Bokhara or Giant, Ac	count of	٠. ١		••	••	164
Canker in Melons and Cucun	bers. A	nswer to O	uery on	• •	••	215
Carrots, Method of obtaining	long ar	id clean		••		237
Cemetery Interment, Review	ed	• •	• •	••		188
Catalogue of Ferns, Reviewed			• •	••		211
Catalogue of Plants, T. Jacks	on, Rev	iew of		**		282
Clematis azurea grandiflora, a Notice of	nd C. si	eboldii, as	Conserv	atory Clin	abers,	20.5
Coburgias, how to Cultivate	••	••	••	• •	• •	285
Cytropodium, how to Bloom t	he	••	••	••	••	286
2 Present to Bloom t	пс	••	••	••	••	286
		D.				
ORI	GINAL C	COMMUNIC	ATTONS			
Diosma, Cultivation of		om on to	ALIUNO,			
Dahlia, Pruning and General	Manag	omont -	••	••	••	79
Derby, Arboretum at	manag		• •	• •	• •	98
Deep Planting, the Evils of		••	••	••	••	146 243
		**	••	••	••	240
	TICES O	F NEW PI	LANTS.			
Dahlia glabrata	••	• •	••	••		18
Dendrobium amplum	• •	• •			••	68
revolutum	• •	• •	• •	••		69
teres						69

						PAGE.
Dendrobium Devonianum	••	••	••	• •	• •	111
herbaceum	• •	• •	• •	• •	• •	139
longicolle	••	••	••	••	• •	140
Moschatum	••	• •	••	••	••	184
calcaratum	••	• •	••	• •	••	187 210
tetragonum calamiforme	••	••	••	••	••	234
discolor	••	••	••	••	••	258
elongatum		••		::		258
Dinema paleaceum			•••			69
Dendrochilum filiforme	••	••	••	••	••	69
glumaceum	••		••		••	259
Delphinium sinense var. flor	e pleno	••	• •	••	••	111
decorum	••	• •	• •	• •	• •	158
Dianthus Gaulthesii	••	• •	••	••	• •	182
Deutzia scabra	••	• •	••	• •	••	184
-	MISCEL	LANIES				
Dablia, the Perfection and I	Disqualifica	tion of				96
Discussion of Questions of				••	• • •	164
	E					
OPI	GINAL COM	MUNIC	TIONS.			D
	GINAL COS	MUNIC	allons.			
Eutaxia, Cultivation of		• •	••	••	• •	78
Evidence of Design in the W			••	• •	1,	
Editor, Notes by, On the Pin Fuchsia		••	••	••	••	11 53
	is Sieboldii	••	••	••	••	55
	ums, &c.				::	57
Cucum						87
			Plants durin	g Wint		100
				•••		105
Cultiva	tion of Hya		• •	• •	• •	123
	rgia Hawta			• •	• •	150
			nall Garden	• •	• •	155
	ggot in On		••	••	••	181
	le Physiolo		••	• •	• •	219
The Tu		• •	••	••	••	242
Deep P Editor, Notices by, Of Horticu	lanung	tula Eu	hibitions at	Chiami	ale · ·	246
			amford Hil		ch	12, <u>60</u> 14
	Nursery, S			• • •	••	80
	incolnshire					82
Garden	s at Buckin	gham I	Palace	••	• •	83
Gravese	end and the	Kent 2	Zoological a	nd Bot		
	rden	••	••	••	••	101
			ultural Soc	iety, a	ad the	
	rrey Zoolog			• •	• •	126
	lengh's Nu			• •	••	273
	Mr., Nurse			• •	• •	274
	s, Messrs. I			• •		274
	Mr. Nursery		rsery, Clapt		••	275 275
	, R. Esq., N			• •	••	276
			Stratford G	reen	••	276
	Mr. King's			••	• • • • • • • • • • • • • • • • • • • •	272
Editor, Plan for a Flower Ga			••	••	•••	63
Remarks by, On Prus		eping	Willow			107
			the shade o			
	Dwelling H					145

					1	PAGE.
Editor, Remarks on The Geran	nium as s	Popula	r Flower	••		29
Mr. P	enn's Met	thod of V	Varming	and Circ	ulating	
	ir in Hot			• •	169	, 252
Epiphyllum, Blooming and Cu	ltivation	of	• •	••	• •	28
Exhibition at Chiswick, Remai	ks on	••	• •	• •		56
****	TORE OF		ANTO			
	ICES OF	NEW PI	ANIS			
Epidendrum patans	• •	• •	• •	• •	• •	17
vitellinum	• •	• •	• •		• •	45
encyclia	• •	• •	••	• •	• •	90
amphiglottis	••	• •	• •	• •	• •	91
lancifolium	••	• •	• •	• •	• •	113
gladiatum	••	• •	• •	••	• •	211
viviparum	••	••	• •	••		234
Echites suberecta		••	• •	• •	••	46
Erica Macnabiana	• •		• :	••	••	68
Banksiana	• •			• •	••	185
Epiphora pubescens		• •	••		••	- 68
Euthales macrophylla		• •	• •		70	. 208
Epimedium violaceum	••	••	••	••	••	88
Echeveria secunda		••	••	••	••	136
lurida		••	••	••	••	208
Efeodendron capense	••	••	•••	•••	•••	158
Eria velntina	••	••	•••	•••		186
clavicaulis	••			•••	••	187
bractescens		-:	•••	••	••	258
Eurybia chrysostrycha			•••			258
Eury ora cury sost yeurs.			••	••	**	200
	MISCEI	LLANIES.				
Earth, The Remarkable Pheno	menon	of its p	roducing	Plants	widely	
different from its usual pr						
1 .1	••	••	••	••	. 6	95
Exhibition of the London Horti				•••	•••	24
Flowers at the Ma			cal Socie			24
Evergreens, the serious Effect of				.,	• •	212
Zireigiteins, inc serious zinete s.			••	•••	••	-1.2
		F.				
ORIG	NAL COM	MUNICA	TIONS.			
Florists' Annual and Guide, by	Clonny	Domarka				OF
				• •	••	25
Fuchsia fulgens, Cultivation of		• •		••		52
corymbiflora, Cultivati	tion of a	· Obiami	- t-	• •	• •	179
Flowers, Remarks on the Exhibi				••	••	56
Flower Garden, Plan for		••	**	**		63
Flowering Plants in Town Gard			ment or,	and the	kinds	-
		• •	••	• •	• •	99
Floricultural Society, South Lon		• •	• •	• •	• •	126
Fruits, Selection of, for a small	Garden	• •	• •	• •	• •	150
Forcing Seakale	• • •	• •	• •	• •	• •	128
NOTI	CES OF	NEW PLA	NTS.			
n . V. to state assessment					10	101
	• •	••	• •	• •	16,	
	•	••	••	••	•• 44,	
	•	••	•••	••	179,	
	• •	••	••	• •	• •	139
Francoa ramosa	•	••	• •	••	••	110
	REV	EW.				
Flora of Yorkshire						161
FIGUR OF LOTESTIFE	••	••	••	••	••	101
	MISCEL	LANIES.				
Fuchsias, Notice of New Hybrids	S	• •	• •	• •	"	20
Query respecting a Wh	ite	• •	••	••		120

					1	PAGE.
Fushias, Notice of a new specie		••	• •	• •	••	141
Notice of Stylosa con			••,	• •	• •	164
Floral Exhibition, At the Man				••	• •	24
Flower Beds, Query on Produc	-		lowers in	• •	• •	165
		***	• •	• •	• •	143
Fence for Sheep	••	• •	• •	• •	• •	212
Flora of Yorkshire, Reviewed	••.	• •	••	••	• •	161
Flower Garden Planting, Obse	rvations of	t the ma	nner of pe	rformin	g the	
Operation of	••	••	• •	• •	••	284
	G	i.				
ORIG	INAL COM	MUNICAT	ions.			
Gardens, Horticultural Society	at Chiswi	ck			12	. 155
Town, Large Floweri						99
Kent, Zoological and			••	••	••	101
Belfast Botanical			••	• •	••	104
Surrey Zoological	••	• •	• •	••	••	126
Garden, Selection of Fruits for			••			150
Greenhouse Plants, Cultivation		••	••	5	, 33, 77,	
0. 1 4. 0 14. 4 .6		••	••	••	••	5
Geranium, A belection of the b					•••	29
Grafting, Cereus flagilliformis		••			•••	32
The Camellia				::		42
Brugmansia aurea		••				178
To obtain Dwarf App	ala Trace i	n Dote		••	••	223
Practical Hints on th	a different	Mathada		••	• •	248
Gnidia, Cultivation of				••	••	35
		••	••	••	• •	101
Gravesend, Notices of		••		• •	**	
Gardening Tour, With Remark			isitea	••		146
Guyscliff, Near Warwick		• •	• •	••	• •	148
Gooseberries, Selection of, for			••	••	••	152
Grapes, Do.		• •	• •	• •	• •	153
The causes of shrivellin		: .	**	•••	• •	175
Grasses, A Selection of the kind	is best for	forming a	close Tu	rt	••	198
NOT	ICES OF	NEW PLAN	ITS.			
Grevillea dubia						17
Gastrochilus pulcherrimus					••	18
Gesneria mollis				• •	••	89
Galeandra Baueri		••	••	••	••	110
Gladiolus insignis		••		••		159
Geranium rubifolium	••			••	•••	183
Rival King						65
Salters' Beauty of B		::		•••	•••	65
~						184
6 1 11 .			••	••	• •	186
	••	••	••	••	••	208
folya, var. vitillina	••	• •	••	••	••	
Classiate autos	••	•• ,	••	••	••	210
Gloxinia rubra	••	••	••	• •	••	209
Gardoquia betonicoides	••	• •	••	• •	• •	256
	MISCELI	LANIES.			,	
Grafting, Root				• •	• •	47
Glycine Sinensis, Notices of						
	••	• •	• •	• •	72	, 164
Gardens of the Royal Botanic	••	• •	••	••	72	, 164 94
Gardens of the Royal Botanic Gardener's Friend, Query resp	Society ecting	••	••	••	••	94 120
Gardens of the Royal Botanic	Society ecting	••	••	••	••	94 120
Gardens of the Royal Botanic Gardener's Friend, Query resp	Society ecting ual Instru	 action, Me	eting of the	 he West	London	94 120 142
Gardens of the Royal Botanic Gardener's Friend, Query resp Association for Mut	Society ecting ual Instru the nece	 action, Me	eting of the	 he West	London	94 120 142
Gardens of the Royal Botanic Gardener's Friend, Query resp Association for Mut Remarks relative to Gardener, Remarks on the pro	Society ecting ual Instru the neces fession of	 action, Me	eting of their being	 he West	London ducated	94 120 142 189
Gardens of the Royal Botanic Gardener's Friend, Query resp Association for Mut Remarks relative to Gardener, Remarks on the pro Greenhouse, Query, on the Bu Query, on Heatin	Society ecting and Instru- the nece- fession of ilding of	ction, Me	eting of their being	he West well E	London	94 120 142 189 213

							PAGE.
Geranium, Remark				••	••	••	144
Giant Clover, Noti			• •		• •	• •	164
Gaillardia picta, G Gloxiniae, Query,			of Cross		••	• •	238 238
Geranium pratense				-	••	••	71
Octamum prateus	b, Ivolice of				••	••	- 44
	•		H.				
	ORI	GINAL CO	MMUNIC	ATIONS.			
Harmony of Natur	re, Observa	tions on	••	••	••	Ι,	49, 73
Heartsease, the Pro		••	• •	••	••	• •	57
	lture of	• •	• •	• •	• •	• •	58
D			••	• •	••	• •	97
Hyacinth, how to			• •	• •	••	• •	121
	of, in Glass		••	• •	• •	• •	122
Heaths, Winter Tr Helen's, St., near I			desard S	met For	•••	• •	130 147
Hothouses, Mr. Per					-	• •	169
Horticultural Socie			urating	A11 111	••	19.	60, 155
ATOTELOUIGIAN DOOR		ford Hill		• • • • • • • • • • • • • • • • • • • •	••	•••	14
Herbaceous Plants					::	••	193
Holly, Cultivation							207
Hot Water, Mr. Per				••		16	9, 252
		TICES OF	-	ANTS.			
Unmaganlia Harri							20
Hymnocaulis Harri Hibiscus multifidus		••	••	••	••	••	46
Cameronii			••	••	••	••	232
azanza		••		••		••	113
Wrove	•••		••	••	••	••	209
Wrayæ Hoteia barbata	••		••	••	••	••	109
Hardenbergia digita			•••	•••	••	111	3, 136
	toniana		•••	••			257
Hymenoxys Californ	nica						137
Huntleya violacea			•••			• • • • • • • • • • • • • • • • • • • •	232
Helichrysum niveun		••				•••	256
Heteropteris undula			••	••	••	••	258
Herbertia pulchella		ea.				• •	278
		MISCE	LLANIES				
Hybrid Fuchsias							20
Hybridizing, Remai		••	••	••		• • •	20
Horticultural Societ						•••	24
	ition at the					•••	24
Horticultural Society							262
Hedge Pruner, Noti							48
			I.				
	ORIG	INAL COL	MUNICA	TIONS.			
Inarching, Camellia	5	••		••	••		41
Brugman	sia aurea			• •		••	178
Ingestry, Hall, near	Stone, the	Seat of th	e Earl o	f Talbot	••	••	147
• • • • • • • • • • • • • • • • • • • •		ICES OF					
Tuin amondiflore							43
Ixia grandiflora	••	••	• •	••	••	••	108
Ipomœa Learii pendula	••	••	••	••	••	••	185
ficifolia	••	••	••	••	••		, 254
Batatoides		••	••	••	••		211
Isomeris arborea	••	••	••		••	::	184
Impatiens candida							186
rosea	••	••	••	•••		••	210

								PAGE.
Ismene virescer	os	••	••					231
Impatiens can	dida		••	••		••	• •	278
-			MISCE	ITAWIE	•			
		-						
Insects, their I						risable ti		
checking			••	••	••	••	••	21
Importation of			••	••	••	••	••	7.1
Ice House, Fill					••	••	••	167
Ismene, Cultiv	anon o	the C		••	••	••	••	236
			1	K.				
			MISCEI	LANIE	s.			
Knight, Mr., N	Tation	the i	ntanded Du	hlianti	n of the D		d C.	
responden						•		48
responden	CO 01	••		••		•••	••	40
			1	L.				
		OR	IGINAL CON	MUNI	CATIONS.			
Lachenaultia,	Cultiva	ion of						6
Linum,	Do.			••	••	• •	••	200
Lambertia,	Do.	••	••	••		••	••	79
Lawns, Destroy				••	••	••	••	37
Their D	nuparat	00 00	d Selections		enne for	••	• •	197
Leamington, M					asses for		••	149
Leamington, M	i. Cuii					••	••	1.49
		N	OTICES OF	NEW I	PLANTS.			
Lœlia cinnabar	ina	••	••	••	••			138
anceps .			• •			• •		44
rubescens	1			• •			••	66
furfurace	8.	• •	••		••		••	67
autumna	lis	••	• •	••	••	• •	• •	90
acuminat	a	• •	••	••	••	• •	• •	257
Lopezia lineata	1		••		••	• •		66
Lupinus leptoca	arpus	• •	• •		••	• •	• •	66
Lythrum roseus	m, var.	superb	um			• •		87
Limonia specta			• •	••	••	• •	••	136
Liatris proping	ua	• •	••	••	••	• •	• •	137
Lobelia discolo	r	••	••	• •	••	• •	• •	186
unident		••	••	••	••	••	• •	182
Linaria glandul	lifera	••	••	• •	••	••		258
			MISCEL	LANIE	š.			
Leycesteria for	more I	ameri	re on					212
Liparia Sphærie				••	••	••	• •	283
Liparia Spileri	ca, Hou	ce u	••	••	••	••	••	200
			N	í.				
		OR	IGINAL COM	MUNIC	ATIONS.			
Manattia analas	Torre							30
Manettia cordat					••	••	••	201
Macao, Remark					••	•	••	33
Murattia, Culti Mesembryanthe			Omamunt	for El	ower Card	ne in co	mmur	229
Moss, To Destre				101 11	ower Gardi	**	mimer	37
Melon, Cultiva	tion of	awns	Comparat					0.1
Seedling P					dantes of	Cutting	,o and	225
occurring P	, and		••	••	••	••	••	~~0
		NO	TICES OF	NEW I	LANTS.			
Monacanthus r	osea all	oa.			••	••		17
	ongifoli			••	••		••	109
	Bushnar		••	• •	••	••		158
Mandevillea su	avolens		••	• •	••	• •	••	17
M yanthus spin	osus				••	• •		44
Macropodium r			••	••	••	• •	• •	44
	VOL.	v.				2 Q		

						PAUE,
Morina longifolia	• •					45
Miltonia spectabilis				••		45
Russeliana	••		• •			160
Marica humilis, var lutea	••			••		67
Malva purpurata	••	••		••		90
lateritia		••	••			209
Maxillaria Skinneri			••			112
Macleii					••	139
Brocklehurstiana		•	••	••	••	235
Candida	••		••	••	••	259
Meyenia Hawtayneana	••	••	••	••	•••	138
Mycranthus obliqua	••	••	••	•••		140
Monolopia major	••		•••	•••		184
Martynia fragrans	•••		•••			186
Microstylis histionantha	••	••	•••	•••	••	187
Mimulus Wilsonii .		••		••		191
Musa superba		••			••	233
Marianthus corulea punctatu		••	••	••	••	
marianimus cerurea punciatu	s	••	••	••	••	235
	MISCE	LLANIES.				
Metal, the difference between	the cond	ncting nov	rers of	Word and		23
Morinas, Notice of	••	· ·				72
Mowing Machine		••	•••	::	••	72
Mouse Traps, Protecting the			••			72
Mimulus Wilsonii, Query res				••	••	191
Melons, Notice of a House fo		a Comion	••	••	••	263
Moore, T. on Grafting the Ora		-		••	••	
Mr. Pamplins, Nursery, Notice		••	••	••	••	287
MI. Fampinus, Nuisery, Notice	e oi	••	••	••	••	283
		N.				
OBIA	TNAT CO					
		MMUNICA"	rions.			
Nature, Remarks on the Harm	ony of			••	1,	49, 73
Nature, Remarks on the Harm Notes, By the Editor 11, 12,	ony of 53, 55,			105, 123,	1, ·	49, 73
	ony of 53, 55,			105, 123,	1, · 150,	49, 73
Nature, Remarks on the Harm Notes, By the Editor 11, 12,	ony of <u>53, 55,</u> 246	57, 60, 8		105, 123, 	1, · 150,	49, 73 154
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s	ony of <u>53, 55,</u> 246	57, 60, 8	7, <u>100,</u>	105, 123,	150,	
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a se	ony of <u>53, 55,</u> 246 small Gado.	57, 60, 8	7, <u>100,</u> 	105, <u>123,</u>	150,	154
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio	ony of 53, 55, 246 small Ga do. on of	57, 60, 8	7, <u>100,</u> 	105, 123,	150,	154 154 203
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries	ony of 53, 55, 246 small Ga do. on of	57, 60, 8 rden	7, 100, 	105, 123,	150,	154 154
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries	ony of 53, 55, 246 small Ga do. on of	57, 60, 8 rden	7, 100, 	105, 123,	150,	154 154 203
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries	ony of 53, 55, 246 small Ga do. on of	57, 60, 8 rden	7, 100, 	105, 123,	150,	154 154 203
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries	ony of 53, 55, 246 small Ga do. on of	57, 60, 8 rden	7, 100, 	105, 123,	150,	154 154 203 272
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries	ony of 53, 55, 246 small Ga do. on of rices or	57, 60, 8 rden r NEW PL	7, 100, 	105, 123,	150,	154 154 203 272 230
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a son Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries Notes on Nurseries Notes on Nepenthes sp. nova Nepenthes, Notice of a New S.	ony of 53, 55, 246 small Ga do. on of rices or	57, 60, 8 rden	7, 100, 	105, 123,	150,	154 154 203 272
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries No. Nepenthes sp. nova Nepenthes, Notice of a New Scultivation of	ony of 53, 55, 246 do. on of rices or Misce	57, 60, 8 rden r NEW PL	7, 100, 	105, 123, 	150,	154 154 203 272 230
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a selection of Notes on Nurseries Notes of a New Selection of Natural Orders, Criticism responses	ony of 53, 55, 246 do. n of MISCE opecies ecting	57, 60, 8 rden F NEW PL	7, 100, 	105, 123, 	150,	154 154 203 272 230 230 231 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries No. Nepenthes sp. nova Nepenthes, Notice of a New Scultivation of	ony of 53, 55, 246 do. n of MISCE opecies ecting	57, 60, 8 rden F NEW PL	7, 100, 	105, 123, 	150,	154 154 203 272 230 230 231
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a selection of Notes on Nurseries Notes of a New Selection of Natural Orders, Criticism responses	ony of 53, 55, 246 mall Ga do. on of misce on misce opecies ecting ticism re	57, 60, 8 rden	7, 100, 	105, 123, 	150,	154 154 203 272 230 230 231 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a selection of Notes on Nurseries Notes of a New Selection of Natural Orders, Criticism responses	ony of 53, 55, 246 mall Ga do. on of misce on misce opecies ecting ticism re	57, 60, 8 rden F NEW PL	7, 100, 	105, 123, 	150,	154 154 203 272 230 230 231 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries Notes on Nurseries Notes on Nurseries Notes on Notice of a New S Cultivation of Natural Orders, Criticism resp Answer to Cri	ony of 53, 55, 246 mall Ga do. n of MISCE OPECIES OF ecting ticism re	57, 60, 8 rden	7, 100, 	105, 123, 	150,	154 154 203 272 230 230 231 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries Noon Nepenthes sp. nova Nepenthes, Notice of a New S Cultivation of Natural Orders, Criticism resp Answer to Cri	ony of 53, 55, 246 mall Ga do. n of MISCE OPECIES OF ecting ticism re	57, 60, 8 rden r NEW PLA specting O.	7, 100, 	105, 123, 		154 154 203 272 230 230 231 238 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries Notes on	ony of 53, 55, 246 small Ga do. on of MISCE Species ecting ticism re	57, 60, 8 rden F NEW PL CLIANIES specting O.	7, 100,	105, 123, 	150,	154 154 203 272 230 231 238 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries No Nepenthes sp. nova Nepenthes, Notice of a New S Cultivation of Natural Orders, Criticism resp Answer to Cri Onions, The Maggot in Additio	ony of 53, 55, 246 small Ga do. on of MISCE OPECIES OF MISCE SPECIES MIS	57, 60, 8 rden F NEW PL	7, 100,	105, 123, 		154 154 203 272 230 230 231 238 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a s Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries Noo Nepenthes sp. nova Nepenthes, Notice of a New S Cultivation of Natural Orders, Criticism resp Answer to Cri Orions, The Maggot in Additic Orchidaceous Plants, Observati	ony of 53, 55, 246 and Ga do. rices of Misce opecies Misce opecies Misce opecies man comment of man Remote on the comment of the comment	57, 60, 8 rden	7, 100,	105, 123,	150,	154 154 203 272 230 230 231 238 238 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivatio Notes on Nurseries No Nepenthes sp. nova Nepenthes, Notice of a New S Cultivation of Natural Orders, Criticism resp Answer to Cri Onions, The Maggot in Additio	ony of 53, 55, 246 and Ga do. rices of Misce opecies Misce opecies Misce opecies man comment of man Remote on the comment of the comment	57, 60, 8 rden	7, 100,	105, 123,		154 154 203 272 230 231 238 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a source, Do. Nemophila insignis, Cultivation Notes on Nurseries NOT Nepenthes sp. nova Nepenthes, Notice of a New S. Cultivation of Natural Orders, Criticism resp. Answer to Criticism resp. Addition Orchidaceous Plants, Observatiant Messrs. Loddiges and Kanton Resp. 1999.	ony of 53, 55, 246 and Ga do. Prices of MISCE Species MISCE Species MINAL CO. Prices of the control	57, 60, 8 rden	7, 100, ANTS s of Cult	105, 123,	150,	154 154 203 272 230 230 231 238 238 238
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries Nurseries on Nurseries Nurseries on Nurseries on Nurseries Nurseries on Nurseries on	ony of 53, 55, 246 and Ga do. FICES OF SPECIES OF SPEC	57, 60, 8 rden r NEW PL specting O. mMUNICAT arks on he Methods with referer NEW PLA	7, 100,	105, 123,	150,	154 154 203 272 230 231 238 238 238 205 271
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries No. Nepenthes sp. nova Note of a New Scultivation of Natural Orders, Criticism resp. Answer to Criticism resp. Answer to Criticiacous Plants, Observatiat Messrs. Loddiges and K. NOT Odontoglossum maculatum	ony of 53, 55, 246 do., 246 do., on of MISCE Species Secting ticism recipient on the constant control on the	57, 60, 8 rden F NEW PL specting O. MMUNICAT arks on ne Methods with referer NEW PLA	7, 100,	105, 123,		154 154 203 272 230 231 238 238 238 205 271
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for a Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries No. Nepenthes sp. nova Note of a New S. Cultivation of Natural Orders, Criticism resp. Answer to Criticism resp. Addition Orchidaceous Plants, Observatiant Messrs. Loddiges and K. Not. Odontoglossum maculatum. Bictoniense	ony of 53, 55, 246 yad do., 246 mail Ga do., 246 MISCE OPECIES OF CITIES	57, 60, 8 rden F NEW PL	7, 100,	105, 123,		154 154 203 272 230 231 238 238 180 205 271
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries Notes of a New Scultivation of Natural Orders, Criticism resp. Answer to Cri. Orions, The Maggot in Addition Orchidaceous Plants, Observati at Messrs. Loddiges and K. Notes of Notes of Natural Orders of Natural Orders on Notes of Natural Orders on Notes of Natural Orders on Notes of Natural Orders of Natural Orders on	ony of 53, 55, 246 do. 246 do. rices of Misce opecies Misc	57, 60, 8 rden	7, 100, of Calt	105, 123,		154 154 203 272 230 231 238 238 238 180 205 271
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries Notes of a New S Cultivation of Natural Orders, Criticism resp Answer to Cri Onions, The Maggot in Addition or Addition Orchidaceous Plants, Observati at Messrs. Loddiges and K Notes Odontoglossum maculatum Bictoniense stellatum Oncidium Huntianum	ony of 53, 55, 246 du. 246 du m of MISCE Species secting ticism retained the constant of the cons	57, 60, 8 rden F NEW PL	7, 100,	105, 123,		154 154 203 272 230 231 238 238 238 271 19 158 5, 112
Nature, Remarks on the Harm Notes, By the Editor 11, 12, 171, 181, 205, 219, 242, Nectarines, Selection of, for as Nuts, Do. Nemophila insignis, Cultivation Notes on Nurseries Notes of a New Scultivation of Natural Orders, Criticism resp. Answer to Cri. Orions, The Maggot in Addition Orchidaceous Plants, Observati at Messrs. Loddiges and K. Notes of Notes of Natural Orders of Natural Orders on Notes of Natural Orders on Notes of Natural Orders on Notes of Natural Orders of Natural Orders on	ony of 53, 55, 246 do. 246 do. rices of Misce opecies Misc	57, 60, 8 rden	7, 100, of Calt	105, 123,		154 154 203 272 230 231 238 238 238 180 205 271

	• •	••	••	• •	69
••	• •	••		• •	113
••	••	••	••	••	140
• •	• •	••	• •	••	184
••	••	••	••	• •	187
• •	••	••	• •	••	234
••		••			234
••	• •				258
	••				113
• •		••		••	160
		••		••	187
		••	••		187
				••	258
					209
					231
	••				279
			• •	• •	
MISCELI	ANIES				
first impo	rted		••		71
					71
					71
					165
					119
					189
		_	-		212
					237
					48
					287
					285
		••	••	••	400
P	•				
GINAL COM	MUNIC	ATIONS.			
					-
4h	D for				7
ith especial	Refere				0.5
			••	• •	.25
small Gar	den				154
			••	••	
••	••	••	••	. •	5
	••		••	••	5 34
ation of	••		••	5,	5
	••		••	5,	5 34 33, 77
vation of for growin	g in V	ineries, ar	d the mo	5,	5 34 33, 77 31
vation of for growin	g in V	ineries, ar	d the mo	 5, de of	33, 77 31 99
vation of for growin	g in V	ineries, ar	d the mo		5 34 33, 77 31 99 202
vation of for growin	g in V	ineries, ar	d the mo	5, de of	33, 77 31 99 202 57
ration of for growin arge Flower d Protectio	g in V ring, in	ineries, ar	d the mo	5, de of	5 34 33, 77 31 99 202
ration of for growin arge Flower d Protectio	g in V ring, in n of	ineries, ar Town Gas	d the mo	5, de of	33, 77 31 99 202 57
ration of for growin arge Flower d Protectio	g in V ring, in n of	Town Gar	d the mo	5, de of	5 34 33, 77 31 99 202 57 58
ration of for growin arge Flower d Protectio	g in V	Town Ga	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97
ration of for growin arge Flower d Protectio	g in V	Town Gas	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63
vation of for growin arge Flower d Protectio	g in V	Town Gas	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107
vation of for growin arge Flower d Protectio	g in V	Town Gar	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40
ration of for growin arge Flower d Protectio	g in V	Town Gas	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99
ration of for growin arge Flower d Protectio	g in V	Town Gas	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 151
ration of for growin arge Flower d Protectio	g in V	Town Gas	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 151
vation of for growin arge Flower di Protectio	g in V	Town Gas	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 151 153 169
vation of for growin arge Flower di Protectio	g in V	Town Gas	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 151 153 169
vation of for growin arge Flower d Protectio	g in V	Town Gai	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 153 169 196 243
vation of for growin arge Flower of Protection	g in V	Town Gau	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 151 153 169
vation of for growin arge Flower d Protectio	g in V	Town Gau	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 153 169 196 243
vation of for growin arge Flower of Protection	g in V	Town Gau	d the mo	5, de of	5 34 33, 77 31 99 202 57 58 97 63 107 40 99 151 153 169 196 243
	a MISCELI first imporeenhouse that will three Specimen ances com for Planting tions for Maggot in t Grafting . Moore on recomm P	MISCELLANIES. first imported reenhouse Plants at will thrive in a Specimens of ances connected of Planting and Stions for Maggot in the Grafting Moore Moore Moore Moore Moore Mother than the special Reference Moore	MISCELLANIES. I first imported reenhouse Plants at will thrive in a Low Ter Specimens of ances connected with If Planting and Sowing com tions for t Grafting Maggot in t Grafting P. GINAL COMMUNICATIONS.	MISCELLANIES. first imported reenhouse Plants at will thrive in a Low Temperature Specimens of ances connected with of Planting and Sowing compared tions for Maggot in t Grafting Moore on recommended P. GINAL COMMUNICATIONS.	MISCELLANIES. ifirst imported reenhouse Plants at will thrive in a Low Temperature Specimens of ances connected with if Planting and Sowing compared itins for Maggot in it Grafting more on recommended P. GINAL COMMUNICATIONS. ith especial Reference to the stronger grow-

Danes Willowsto Lade	. W D.						PAGE.
Pansy, Tillery's Lady	Mary D		••	••	••	••	207 207
Nonpareil Portulaca Thellusoni	•••	••	••	••	••	••	45
Polemonium cæruleu			•	••	••	••	46
Polystachya bracteos				••	••	••	46
ceria.		••	••	••	••	••	186
reflexa		••	••	•••	••	•••	257
Passiflora verrucifera			•••	•••			8, 110
	•••	::					109
Pentstemon fruticosa		::		•••		•••	70
Fentianoi						•••	70
heterophy		••	••		••	••	257
Pinus filifolia	• •	••	••	• •		••	91
coulteri	• •	••	••	••	••		91
Pleurothallis pachygl	ossa.			••	••		112
recurva		••	••	• •	••	• •	210
luteola				• •	••		210
seriata			• •	••	• •		140
Phlox coldryana	• •	• •	• •		• •	• •	138
Pernettya mucronata				• •	• •	• •	157
Pimelea nana	c •	• •	• •	• •	• •	••	158
spectabilis	• • •	• •	• •	• •	• •	• •	211
Puya heterophylla	••	• •	• •	••	• •	• •	183
altenstenii	• •	• •	• •	• •	• •	••	186
Pholidota conchoidia	••	• •	• •	• •	• •	• •	185
undulata	• •	• •	• •	• •	• •	• •	211
Pionaya elegans	••	• •	• •	• •	••	• •	186
Peristylis Goodyerioid	es	• •	• •	• •	••	• •	187
		RE	VIEW.				
Paxton's Botanical Di	ictionary		••		••		114
	on on any				••	•••	
			LLANIES	•			
Pelargonia, their Man		during \	Winter	• •	• •	• •	22
Pelargonium, Its Cul		••	• •	• •	• •	25	9, 260
	the best	kinds	• •	• •	••	• •	263
Pansy, Intended Hist		••		• •	••		23
Information s				• •	••	• •	23
Remarkable sp			. • •	• •	••	• •	119
Persian Melons, A H				• •	••	• •	263
Pruning Hedges, A N	ew Instr			••	••	••	48
Poinsetta pulcherrima				• •	••	••	190 70
Pentstemon fruticosa, Peach, A new variety	of		COCCINE			••	72
Park, Intended on the		a of the N	fetronol	ie ··	••	••	142
Planting, Observation		• • ·	acti opoi		••	• •	237
Portulacea Thellusoni			••	••	••	••	259
Protea, Cultivation of			::	::	••	::	261
Pinks, Propagation o		••		::		::	263
Paxton's Botanical D							114
Pereskia aculeata, on					grafted on	••	285
Plants in the natural s	tate, on t	he Temp	erature	most favo	urable to	••	284
		-					
		C	2.				
	NOT	ICES OF	NEW PI	ANTS.			
Quercus acutifolia	••	• •		••	••	• •	160
reticulata	••	••	••	••	••	• •	160
	• •		••	• •	••	• •	160
spicata	••	••	• •	• •	••	• •	160
Mexicana	• •		••	• •	• •	• •	160
glaucescens		• •					160

							DICH
0							PAGE.
Quereus siderosyla	••	• •	••	••	• •	••	160
lancifolia	• •	••	••	••	••	••	160
petiolaris	• •	••	••	• •	• •	••	160
		1	REVIEW.				
Out of Flames							116
Queen of Flowers	• •	• •	• •	••	• •	••	116
		MISC	ELLANIES.				
Owener On the Origin	n of Can	kon in ('naumhana	and Mala		70	164
Query, On the Origin							2, 164
Respecting th					,,		120
On the mean	s of produ	icing a	succession	of Howers	ın small	fancy	
Beds	••	• • -	• •	• •	• •	••	165
Concerning N	felon-sha	ped Cac	teæ	• •	• •	• •	191
On Mimulus	Wilsonii	••	••	• •	••	••	191
Preserving	Onions !	from th	e attack of	Grubs	• •		191
The appli	cation of	Arnot's	Stove to C	reenhouse	es		166
Camellias					••	•••	213
			g Persian	Melons	•••	•••	214
			of Jerusal				215
Gaillardia			or octubus		••	••	238
		Cnomi	na Clorini	••	••	••	
			ng Gloxini		• •	• •	238
			ing the Ora	inge 1 ree	• •	• •	263
Queen of Flowers, F	teviewed	• •	••	• •	• •	• •	116
			R.				
	ORI	GINAL	COMMUNICA	TIONS.			
Raspberries, Selectio	n of for i	Small	Gardon				153
				of a good	171	•••	
Ranunculus, Its Cul						••	124
Ranunculus, Cultiva				ne wire	vorm	•••	205
Roots of Vegetables	, Remarks	upon	•••	•••	•••	••	217
	NC	TICES	OF NEW P	ANTS.			
DI 1 1 1							-
Rhododendron Cano				•••	•••	***	67
	reum cin	namom	eum floribi	is roseus	•••	•••	137
Rodriguezia crispa	•••	•••	***	•••	•••	•••	112
maculat	a	• • •	•••	•••	•••	•••	187
Roscoea purpurea	•••	•••	•••			•••	157
Roellia ciliata	•••	•••	••		•••	•••	185
Rigidella flammea		•••	•••	•••	•••	•••	185
Rivea Tiliæfolia	•••	***	•••	•••	•••	•••	235
111100 1111010110	•••	***			•••	•••	200
		MIS	CELLANIES.				
Roses, The Destructi	ve Attack	s of An	hides on and	the mear	s of avoi	ding it	21
Propagalion of							47
				f for Gas	fina.	•••	
Roots, The time of to						•••	47
Rot in Sheep, Remai					1		71
Report, Explanatory		Design	for the Ga	raen of t	ne koya	n Ro-	
tanical Society			•••	***.	- ***	***	94
Rubus, Difficulty of	distinguis	hing th	e reported	varieties o	f		166
Riley's Catalogue of	f Ferns, 1	reviewe	d	•••	•••	•••	211
Rosa Banksæe lutea,	on severa	al fine I	lants of	••	••	••	285
			S.				
	ORI	GINAL	COMMUNICA	TIONS.			
0							
Struthiola, Cultivation		•••	•••	•••	***		6
Sprengelia, Cultivat				•••	•••	•••	77
Sea Kale, Cultivatio				•••	***	• •	128
Sandon Hall, near S				Harrowb	у	•••	147
Shugborough Hall, t						***	147
Strawberries, Selection				•••	•••	***	153
Shrubs, Remarks on						•••	100

CL.11.4. 41. C.14. 41						PAGE.
Shallots, the Cultivation		•••	•••	•••	•••	227
Soils, Observations on, an	d Improvemen	it of	•••	•••	•••	246
Showy Annuals, Select Lin	st of	•••	•••		•••	268
Showy Perennials, List of,		growi	ng in the		during *	
Summer		***	-6	•••		269
	•••		•••	•••		
	NOTICES OF	NEW	PLANTS.			
Solanum crispum	•••	•••	•••	•••	•••	16
Bataceum .	•••	•••			•••	19
augustifolium						139
macrantherum	4.3	•••	•••	•••	140	, 232
Jasminoides	. ***	•••	•••			234
Salvia Linarioides	•••	•••	••	••	•••	
	•••	•••	•••	•••	•••	19
hians	•••	•••	***	•••	•••	70
regla	•••	•••	•••	•••	156, 186	
prunelloides	••	•••	•••	•••	•••	186
tubifera	•••	•••	•••	•••	•••	235
Stenomesson latifolium	•••	•••	•••	•••	•••	44
Sprekelia cybister var. bre	vis	•••	•••	•••	•••	45
glauca	•••	•••				8, 255
Silene compacta	•••	•••	•••			65
Stanhopea Martiana			•••	•••		69
graveolens	•••	•••	. •••	•••	•••	91
Wardii	•••	•••	•••	•••	•••	
	•••	•••	•••	•••	••	113
aurea	•••	•••	•••	•••	•••	235
Spironema fragrans	•••	•••	•••	•••	•••	89
Stylidium fasciculatum	•••	•••	***	•••	•••	89
Saccolobium denticulatur	n	•••	•••	***	••	90
Sarcanthus oxyphyllus	•••	•••	•••	•••	•••	90
pallidas	•••	•••	•••	•••	•••	140
Sedum multicaule	•••	•••	•••	•••	•••	91
Sarchochilus unguiculatu						112
Senecio Heritieri var. cya					•••	137
Schizonotus tomentosus	-	•••	•••	•••	•••	139
Spirea fissa	•••	•••	•••	•••	•••	
rotundifolia	• •	•••	***	•••	•••	139
		•••	•••	•••	•••	187
Kamtchatica var. l	iimaiensis	•••	•••	***	•••	234
Statice pectinata	•••	•••	•••	•••	•••	157
Sida picta	•••	•••	•••	***	•••	184
Sobralia sessilis	••	•••	•••	•••	210	, 255
Sowerbæa laxiflora	•••	•••	•••		***	232
Spiranthes Lindleyana	***	•••	•••	•••	•••	236
Sisyrinchium majale	***	•••	•••	•••	***	236
Stevia trachelioides	***	•••		1		256
Severinia buxifolia	•••			•••	•••	258
Styphelia tubiflora		••	•••	•••	•••	
- JP	•••	•••	•••	•••	•••	254
	REV	IEW.				
Sentiment of Flowers, The	•					004
- I would be a second the	• •••	•••	•••	•••	•••	284
	MISCEI	LLANII	ES.			
Sheep, Probable Cause of	the Rot in					
Fence for Lawn		•••	•••	••	•••	71
Succulent Plants, Waterin		•••	•••	•••	•••	212
Singe and Spaile Make -	of Destart	•••	•••	••	•••	190
Slugs and Snails, Method	of Destroying	••	• •	•••	•••	213
Salvia patens, Supposed to	o be hardy	•••	•••	•••		262
Skilled Gardener		••	•••	•••		189
Sentiment of Flowers, re-	iewed	•••	•••	•••	•••	280
Statice Arborea, how to C	ultivate	•••		•••	•••	283
Spihocampylus bicolor, ho	w to Cultivate	2	***		•••	283

		т.			1	PAGE.
OR	IGINAL CO	MMUNIO	ATIONS.			
Tulip, The best mode of gro				roperti	es of a	
good flower	a.	•••		oroper a	cs or a	123
Tulip, Cultivation of		•••	•••		179, 195	
Tulips, A selection of	••	•••	•••	•••	***	27
Trentham, near Stone, the					•••	147
Tiddesley Park, near Penkri					•••	148
Thunbergia, Inquiry respect	ing	•••	•••	•••	• • •	149
Turf, A selection of grasses	for formin	g fine a	nd close	•••	•••	198
Trees of Macao, Remarks o	n	•••	•••	•••	•••	201
N	OTICES OF	NEW P	LANTS.			
Tradescantia iridescens	•••		•••	•••	•••	45
tumida	•••	•••	•••	•••	••	66
Thunbergia aurantiaca	•••	•••	•••	•••	•••	16
Hawtayneana	•••	•••	•••	•••	•••	150
grandiflora	•••	•••	•••	•••	•••	159
Thalictrum cultratum	•••	•••	•••	•••	•••	46
Tanacetum longifolium	•••	•••	•••	•••	••	46
Trifolium involucratum	•••	•••	•••	•••	•••	70
Trigonidium ringens	•••	•••	•••	•••	•••	90
Triptilion spinosum	•••	•••	•••	••	•••	91
Tagetes corymbosa	•••	•••	•••	•••	•••	138
Thomasia canescens	••	•••	•••	•••	•••	186
Tropæolum Moritzianum	•••	•••	•••	•••	•••	208
brachyceras	•••	•••	•••	•••	•••	233
Tofieldia pubens	•••	•••	•••	•••	•••	256
Triptilion spinosum	•••	•••	•••	•••	•••	277
	RI	EVIEW.				
T. Jackson's Catalogue of Pl	ants, Revi	ew of	•••	••	•••	282
	MISCE	LLANIES	3.			
Traps for Mice, Method of 1	rotecting	baits in	• • •	•••	•••	72
Trees, Curious circumstance			Oak	•••	•••	119
Remarks on situation	s for Oak	•••	••	•••	•••	212
Tying up Plants, on the Mar	ner of	•••	•••	•••	•••	283
The Lime Tree, Timber of, 1	preferable	to the W	fillow	•••	•••	285
		v.				
0.00	GINAL CO					
Vineries, A selection of plan				ad their		31
Vines, Formation of borders		ne cultur	e of	•••	•••	175
Selection of, for a sm			•••	•••	•••	153
Vegetables, Remarks upon t			•••	•••	•••	217
Vine in Pots, on the Culture	or the	•••	•••	•••	•••	265
N	OTICES OF	NEW F	LANTS.			
Verbascum tauricum	•••	•••	•••	•••	•••	17
Valeriana napus	•••	•••	•••	•••	•••	140
Verbena amæna	•••	•••	•••	•••	•••	43
scabra	•••	•••	•••	•••	•••	87
triumphans	•••	•••	•••	•••	•••	87
Vanda tesselata	•••	••	•• ,	•••	•••	208
violacea	•••	••	***	•••	•••	235
	MISCE	LLANIES	3.			
Victoria Regia, Notice of	•••			••	•••	96
Victriol recommended for des			Blight	•••		286
	7		.6			

					PAGE				
	w.								
ORIGINAL	COMMUNIC	ATIONS.							
Willow, Weeping, Remarks on									
Wortley Hall, near Sheffield, the seat of Lord Wharncliffe									
Wentworth House, near Rotherham, the seat of the Earl Fitzwilliam									
Willersley House, near Matlock, th	e seat of R	ichard Ark	wright, E	sq	146				
Warwick Castle, the seat of the Ea	Warwick Castle, the seat of the Earl of Warwick								
Wire Worm, How to prevent the de	struction of	Ranuncul	uses by th	е	205				
, v	ISCELLANIES								
Wood, The difference between the		-	Metal and	d	23				
Watering, Pelargonia during Wint	ier	•••	•••	•••	22				
Succulent plants	•••		•••	•••	190				
Wistaria Sinensis, Notice of a mag		cimen of	•••	•••	164				
Wood Lice, Method of destroying		•••	•••	•••	190 262				
Method of freeing pits and frames of									
Walnuts, Extracting the Oil of	•••	•••	•••	•••	191				
Wistaria Sinensis, Notice of this bea	autiful Clim	ber	•••	•••	285				
	Z.								
ORIGINAL	COMMUNIC	ATIONS.							
Zoological Gardens at Gravesend			***	***	101				
The Surrey		•••	•••		126				
•									
NOTICE	OF NEW P	LANT.							
Zygopetalum Africanum	••	•••	•••	6	57, 112				
MI	SCELLANIES								
Zoological Gardens at Manchester,	Floral Exh	ibition at	•••	•••	24				



ove ovall Serencia

FLORICULTURAL MAGAZINE,

AND

MISCELLANY OF GARDENING.

EDITED BY

ROBERT MARNOCK,

CURATOR OF THE ROYAL BOTANIC GARDEN, REGENT'S PARK, LONDON.

VOL. VI.—1841-42.

LONDON:

R. TYAS, PATERNOSTER-ROW; RIDGE AND JACKSON, SHEFFIELD.

G. RIDGE, PRINTER, SHEFFIELD.

PREFACE.

IF compared with other Periodicals of the class to which the FLORICULTURAL MAGAZINE belongs, the superiority of the plates, and the general style of getting up the letter press, will be found greatly to surpass any contemporary Work. That this superior manner of bringing out the FLORICULTURAL MAGAZINE has been very generally acknowledged and admired, is matter of some gratulation, and the effort which has thus been made has had the effect to very much improve this description of property, and so far, our exertions have been successful; but here congratulation ends, since the very great additional expense incurred in its preparation, has rendered it impossible to continue it, and the Work will, therefore, cease with the present Number, which completes the Sixth Volume.

It now remains for us to sincerely and heartily thank a very numerous class of Friends who have aided, and, in various ways, encouraged us; and, in conclusion, we beg to intimate, that although the Floricultural Magazine has ceased to exist, it is not our intention to allow the friendly intercourse which has thus been established, to terminate.

ROBERT MARNOCK.

Royal Botanic Garden, Regent's Park, 19th April, 1842.

INDEX TO THE EMBELLISHMENTS.

						REFERENCE		
						PLATE.	AT	PAGE.
Æschypanthus ramesissimus		• •	• •	••	••	63	••	36
Camellia Japonica var. Pears	onian	a		••		62	••	11
Fuchsia; Prince Albert	• •			• •	. •	72		25 6
Lechanultia biloba	• •	• •		••		65		84
Martynia fragrans	• •	• •	••	••		70		208
Mimulus, M'Lanii	••	••		••		68	••	158
Pelargonium, Rising Sun	• •	••				66		109
Queen of Fair	ies		••	••		67		135
Wonder		••	••			67		135
Phlox Bridgesii			• •	••		69	••	182
Broughtonii	• •		••			71		232
Rhododendron, arboreum all	oum;	var. P	rincess	Royal	••	66	••	110
Statice Dickinsonii						64		61



FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXI.—JUNE, 1841.

ON GRAFTING.

BY F. R.

Having given some plain directions for the process of Grafting, I proceed to the modes of propagation by inoculation, or budding; also in-arching, or grafting by approach. In the first place, I would recommend all who may be desirous of working their own fruit trees for walls, to raise a supply of stocks from the drupe or stone of the peach, apricot, and plum; plants from seed being less inclined to throw up suckers, than those which are taken off the roots of old trees: it is also advisable to work each sort on its own stock, more particularly the apricot, which I have reason to think would be more enduring, and less liable to gum and canker, than when worked on the plum. The sorts usually propagated by budding, are the peach, nectarine, apricot, and sometimes the cherry, and pear. The time for performing this operation, is when the sap is sufficiently vigorous to admit of the bark separating freely, when the incision is made. of course, will vary in different plants, and will, in some degree, be governed by the season. June, however, is the time when it may be commenced with the best prospect of success. Provide some new bass matting for ligatures, a budding knife, and strong healthy cuttings of the required sorts to be worked; these should be kept in water, if the weather is dry and hot; then make an incision in the stock, as at Fig. 1, six or eight inches from the ground, if for a dwarf trained tree, and from three to five feet, if for trees intended for high walls, where others are to be trained under or between them; then select from the shoots already provided, a bud which appears to be full and strong, which will in general be indicated by the healthy appearance of the leaf, and with the point of the knife, separate it from the shoot with a portion of the bark in the form of a long shield, leaving a portion of the leaf attached, (Fig. 3.) and with the finger and thumb gently press the broad part of the latter on the side of the

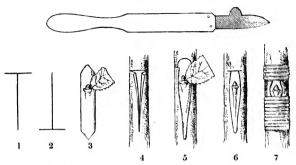


Fig. 1. First incision,

- 2. Inverted incision.
- 3. The bud prepared for insertion.
- 4. The bark of the stock laid open to receive the bud.
- 5 The bud inserted; its upper part protruding above the horizontal cut.
- The same, with the upper part cut horizontally, and ready to receive the ligature.
- 7. A bud secured with the double ligature.

cut part, the woody portion of which will then readily slip off; examine it, and if the germ of the bud is still attached to the bark, raise the bark on each side of the incision in the stock (Fig. 4.) with the ivory end of the budding knife, and insert the bud neatly, pass the edge of the knife in the original horizontal cut, and remove the upper part of the bark attached to the bud, having ready your ligature, commence by passing the middle of it exactly over the horizontal cut, bringing the two ends round immediately under the bud; continue thus cross-banding it till the whole of the incision is covered, and securely tie the ends; care must be taken that the bud, or eye, is not covered. If on removing the bud from the woody portion cut with it from the shoot, there appears a small hole on the inside of the bark, it is useless, as the germ has remained on the wood, consequently another must be taken. I have sometimes used a quill, formed as a scoop, for taking out the wood when a small portion of it is cut, attached to the bud; this must be done with the shoots of roses, which do not so readily slip, as the buds of fruit trees. Roses are in general worked on standards, either raised from the seed of the common dog rose, or plants taken from the hedges in the winter, and planted out for the purpose; those who reside in the country may work them in the hedges, and remove them to the garden in the fall of the year when the buds have taken. Budding is sometimes performed with a double ligature; when the bud begins to shoot, the under string is cut to facilitate the ascent of the sap, which is

thrown into the new shoot with its full force; some also reverse the form of the incision as at (Fig. 2.) under an idea that the wet is prevented from entering between the bark; these are mere fancies. "A Subscriber" in your last number wishes to know the best way to work oranges, I should say in-arching is the most certain method, and budding the best. The way in which I take the buds for working my oranges is, with a sharp knife to slip off from a healthy shoot, a bud with its leaf, and as little of the wood as possible, and proceed as above directed; this does no injury to the old plant, and saves the removal of a shoot, which might spoil the appearance of the head.

In-arching is performed at any time during the summer, and is principally practised on the camellia, orange, and various other woody exotic plants. Seedling plants of the Seville orange, and well-rooted layers of the single Camellia, planted near the side of the pot, are to be procured, and elevated by means of inverted flower pots, or similar contrivances, close to the branch intended to be worked. selected a convenient shoot, and pared away a portion of the bark and wood, do the same by the young plant, and see that on bringing them together, the bark meets at the sides and ends; tie them firmly, and secure the pots in such a manner that they may not be displaced. and in about six weeks they will be united. It will be proper to separate them cautiously; that is, cut a little at a time, and if you see that the upper part does not droop, repeat the cutting, and so on, till they are entirely divided. Remove the head of the wilding, but let the ligature remain for a month or two, to prevent injury. In this way, a branch of the orange or lemon may be in-arched, with the young fruit and blossom on it, with success. This, I repeat to a "Subscriber," is a sure way, but I have generally found that budding makes the finest plants. These trees may also be grafted; they then require bottom heat to force them, and it cannot always be depended In a trained Pear, or espalier Apple, it sometimes happens that a side shoot or limb is injured; in that case, bring down a shoot of the preceding summer, by bending, and in-arch it near the vacant space, and thus the tree will be restored to its original form, and the wall filled.

I send you a sketch of my budding knife, which I find very useful, the part at the back of the blade has a blunt smooth edge, which supersedes the use of the ivory handle for opening the bark; this forms part of a set of tools made under my own direction for pruning, grafting, &c. If you think they would be interesting to your readers, I will send you drawings of them.

Topsham, April 12, 1841.

FURTHER REMARKS RELATIVE TO THE EFFECT OF GRAVITATION UPON SEEDS AT THE TIME OF GERMINATION.

BY E. F.

In compliance with a request you expressed in a note appended to my essay, inserted in the *Floricultural Magazine*, for March last, I hasten to explain the remarks I then made with regard to the beans germinated upon the circumference of a wheel in motion. I should have done this immediately upon the publication of the article alluded to, but it was only a day or two ago, when your Magazine came into my hands.

You directed my attention to the question " If there be any analogy between the revolutions of the latter (the wheel), and that of the diurnal motion of our earth; and if the roots protruded outwards, whether the hypothesis thus sought to be established, be not rather weakened than strengthened by the illustration in question." To this I answer, that, under existing circumstances, there can scarcely be said to be any analogy, neither was it my intention to consider the rotation of the wheel, as a representation of the like motion of the Gravitation is a power of attraction, possessed by all bodies with which we are acquainted, which act upon, and are acted upon by each other, in proportion to the density and magnitude of the respective bodies; so that a stone, or any thing else of the kind, of any given weight, if it could be removed from the earth to one of the other planets, would, while it remained there, be increased or diminished in weight, according to the relative size of the planet to which it was conveyed, without varying in reality the least from its former density or size; and if brought again to the earth, its weight would be found to be the same as before its transition, so that in this case, the wheel, or any other body, could bear no true analogy to the earth, unless it was equal to it in density and size, as this attractive force was prevented acting upon it, so as to affect the seeds germinated upon its circumference by its motion. Had it been a representation of the earth, true in these respects, it certainly would be sufficient to overthrow the theory which I advocated, as in this case, "the order of the vegetable world should be inverted," as you say; but when we consider the purpose to which I applied this illustration, we shall see otherwise.

I stated that one of the principal causes of roots protruding downwards into the earth is, the gravity of the latter "which, if counteracted in any way, their direction would be changed," and then brought forward, this experiment, as an example, of seeds germinated when the earth's power of gravitation was counteracted, by the revo-

lutions of the wheel exposing each side alternately to this attraction, so that it could have no influence towards causing the radicles to take any one direction in preference to another. Had there been no power of attraction or retraction left influencing them, it appears at least probable, that each would have taken any direction, according to that in which the bean was placed; but the centrifugal force was still in action, which has a tendency to cause all revolving bodies to recede from the centre of motion, and in the absence of the earth's power of gravitation, gives them a direction outwards. Here we find nothing, as I can perceive, in the least to invalidate my proposition, but have a strong argument in its favour; for as we see that in the absence of the gravity of the earth, the roots would change their natural direction; it is clear that this gravitation tends very materially to give them that direction, and this is all that I contend for.

That I would not be understood to say that this is the only cause of the descent of the roots, may be observed from what I said in the article in question, at page 219, volume V. For this would be quite at variance with the general working of the great system of nature, in which no power, or agency, appears to be final; and for itself alone, or acts externally of itself, to which the natural production is as passive matter, like materials in the hand of a human workman. There is a co-operation between the productions of nature, and this external agency, to which is to be attributed all the variations in the form and size of the roots observable in different kinds of vegetables; otherwise they would all descend right vertically, without any deviations from this general law, and would be all in this respect similar. In which case there would not be seen that perfection which is displayed in the works of the great author of nature.

Meivod, April 10th, 1841.

[Our previous remarks has had the effect of inducing our esteemed Correspondent to treat this interesting question somewhat more in detail, and so far our object has been attained. We shall be glad to hear again from the same quarter.—ED.]

REMARKS ON AN EXPERIMENT MADE TO ASCER-TAIN THE EXISTENCE OF ASCENDING AND DESCENDING VESSELS IN PLANTS.

BY F. W. L. ROSS.

I feel much pleasure in your assurance that my trifling communications are acceptable in the promotion of your interesting work.

If they have any merit, it is simply that I write from experience and not theory.

Respecting the inverted tree, it was an experiment made to satisfy my

own mind, on the subject of the ascentand descent of the sap; much, having been said relative to the physiology of plants, in that little understood department of the mysterious workings of nature. The tree in question was a seedling willow, which had accidentally sprung up in the garden, and being the most convenient from its elasticity for my purpose, was therefore selected; I am, however, convinced that any tree or shrub, which may be propagated by layers, would answer equally well. The tree in question was gradually brought from the erect position, and the branches covered with earth, in which state it remained until certain of them having struck root, the original roots were then freed, and it was restored to the upright form, with its old roots upwards, it soon made fresh shoots and grew equally as well as before; and would, no doubt, have continued to do so, had I not removed it when quite assured of the results.

A few years since, a gentleman was here lecturing on the analogy between plants and animals, laying great stress on the ascending and descending vessels, which he fancifully compared to the arteries and veins in the animal system. I had a long conversation with him, and his positive assertion as to the infallibility of his exposition, led me to call his attention to the inverted tree, then in a fine growing state; he was much struck with its appearance, and seemed convinced that what he had so boldly maintained as facts, were in reality mere theoretical and speculative ideas.

I will again follow up the investigation with a young apple tree, and when established with new roots, graft it; there can, I should think, be no doubt of its success, for if it will produce shoots from its own stock, it will most certainly form a union with a proper scion.

Broadway House, Topsham, April 9th, 1841.

SUGGESTIONS ON PLANTING ACORNS.

BY F. W. L. R.

The circumstance detailed in the following remarks may be interesting to planters:—Some years since, I put in with a dibble, about a dozen Acorns, and when about to transplant them, I observed that one had made considerably more progress than the others, in the proportion of three inches to one, in the length of the stem; being curious to know the reason, I carefully examined the ground to trace the direction of the roots, and found that it had been accidentally planted on a flat stone, and instead of making a long tap root, as the others had done, the obstruction had caused the roots to diverge horizontally. I afterwards tried the experiment with a slate under the Acorn, and found the results similar; and should, therefore,

conceive it would be of great advantage, if generally adopted, as it would obviate the necessity of cutting off the tap roots in transplanting, by which many plants must be destroyed.

A narrow trench may be opened, and women, or children, be directed to drop pieces of old slate or tile, on which the Acorn may be placed; if one drill were sown in this way, and another on the old system, it would soon be seen which was the best plan.

The above remarks serve as an illustration of one of the most important facts connected with the growth of plants. In the case of fruit trees, and those which more particularly come within the scope of gardening, it has been fully proved that the extension of the roots in an horizontal direction is as necessary to ensure healthiness and fertility, as a suitable soil and situation, and there is no reason to suppose that the same law does not apply equally to the growth of forestrees; such being the case, it follows that this direction ought to be given to their roots at an early period of their existence, and the above plun, or some modification of it, appears to be exceedingly well adapted for the purpose.—ED.]

ON THE SUMMER PRUNING OF FRUIT TREES.

BY T. MOORE.

The operation termed Summer Pruning, consists in the removal, whilst in a young and unsolidified state, of that portion of the young shoots of a tree, which are superfluous; of which description a considerable portion is annually produced. It may be regarded as an operation purely artificial; nothing similar, or at all equivalent to it, taking place in a state of nature. Its object is to economize the sap, which is taken up into the system of an individual plant; such an economy being rendered necessary, by the no less needful practice of regulating the supply and quality of food, by causing its roots to extend themselves near the surface, in borders, prepared with a strict purpose of checking exuberance, and inducing fruitfulness, That portion of the shoots of an artificially regulated tree which are superfluous, are those which stand foreright from the wall, and are irregularly, or too thickly produced on the tree; these being altogether useless, as far as the artificial regulation of the plant is concerned. it must be evident, that their removal, by diverting the current of sap from this useless expenditure, must tend to increase the size, and improve the quality of the fruit; and also assist in maturing the wood and buds, retained for the succeeding season; this latter object being effected by the admission of a greater share of light and air. among the foliage and branches, whereby the necessary elaboration of the sap is promoted and encouraged. It may be well here to mention, that this operation if performed at a time when the roots are not in good train, but excited by every incentive to rankness and luxuriance, will be productive of effects very far removed from those which the operation is intended to produce.

In treating on this subject, it must be premised that certain kinds of fruit trees, such as the Peach, Apricot, &c., generally receive a greater, or less amount of this attention; although in very many cases, this is far from being so in a sufficient degree. With others that would well repay the trifling amount of labour required, the operation seems almost totally neglected; the currant, and other small fruits I may instance as examples. I will now proceed to detail the leading points of the operation, as applicable to the following kinds of fruit trees.

Peach.—The season of commencing the operation with these is early in May, at which time a selection of shoots is to be made, to furnish the tree with bearing wood for the succeeding season, in every part of the tree, as well as to fill up vacant spaces, where such may occur. At this first dressing, all young shoots not having fruit set at their base, must be rubbed off, with these exceptions; on the year old wood from eight to fourteen inches in length, one shoot should be retained near the base, another on the opposite side, a little higher up and the leader; on the year old wood under eight inches in length only the leader, and one well placed shoot near the base should be In order to fill vacant spaces with young wood, strong shoots situate near them, may be shortened in June, which will induce them to throw out two or three laterals; these in ordinary cases will be sufficiently matured by the autumn; the young wood should on no account be shortened, or impeded in its growth, except for this purpose: as soon as the fruit is stoned, the shoots must again be regulated; those which before were left as permanent ones, must be carefully secured to the wall, to prevent their sustaining injury from strong, or boisterous winds; the remainder, those having fruit at their base, must be shortened to about three eyes; had these shoots been stopped at an earlier period, the fruit would not have stoned so well; but by shortening them after this is effected, the sap is directed to the fruit, and materially contributes to increase its size. One of the greatest evils attending the cultivation of the Peach is, the old and erroneous practice of laying in too many shoots on the tree, which require time, nails, &c., to fasten them to the wall, which exhaust the tree three-fold more than fruit it produces; crowd and shade! the fruit with unnecessary foliage; and which, after all, are removed at the winter pruning. I may here mention that these trees require some attention through the whole summer, in securing any shoots that may accidentally get displaced, and also occasionally in removing, or checking luxuriant growths.

Intimately connected with this regulation of the young shoots, is

the thinning of the fruit; this should commence when they are about the size of peas, using a pair of small pointed scissors, and taking off only those which are situated in clusters, so as to press each other. A second thinning should be attended to when about half the size of gooseberries; and again finally after they are stoned. This last thinning if it could be performed earlier, would save much exhaustion of the strength of the tree; but various causes combine which render it politic to reserve the final thinning until after that period. No positive rule can be laid down to regulate the quantity of fruit each tree should mature; in general, sickly or young trees should carry a less crop than more established ones, and those kinds producing large fruit, should be allowed to mature fewer than small growing ones. Luxuriant trees may carry heavy crops, as a means of checking their exuberance.

Apricot.—Like the peach, their summer pruning consists in removing irregular, luxuriant, and superfluous shoots. A due supply of young wood is to be retained over the tree, and the rest removed as tending to expend its energies in an unprofitable manner. With regard to the thinning of the fruit, these are generally allowed to grow to a certain extent, in order that they may be used for tarts and other domestic purposes. It is desirable, however, that they should be thinned as early as practicable, for the reasons already mentioned under Peach.

Vine.—In the summer pruning of the Vine, it is necessary to select such shoots as will be required for the production of fruit the following year; and in choosing these it must be borne in mind, that they should be distributed equally over the tree. If the practice of long training is adopted, these must be encouraged to extend their full length, or as far as may be required; which they will readily do, if proper support is afforded them. The other branches may be stopped, at the bunch, and the laterals must be kept stopped to one joint, and the tendrils removed. When trained on the spurring system, it is only necessary to stop at the first joint beyond the bunch, and (except to fill up vacancies) remove all the shoots which do not shew fruit.

Plums and Cherries require a regulation of their summer shoots in May, and again in July, removing ill-placed ones, close to the old wood, and shortening those which it may be desirable to leave for artificial spurs to one or two eyes; these should not, however, be encouraged any more than can possibly be avoided. Morelli cherries require severe thinning, as they produce a greater number of young shoots than some other kinds. Plums and cherries grown as dwarf standards should be attended to also; crowded, or cross shoots, should be removed to admit light and air to the centre of the tree.

Apples and Pears .- These trees generally produce their fruit on spurs, either naturally produced or formed artificially by pruning. From some radical defect, such as deep planting, or planting in too rich a soil: these spurs not unfrequently, instead of fruit, produce a vast and useless profusion of breast wood; nor is the tendency easily corrected. Pruning has little effect, unless the spurs are removed close to the old branch; perhaps the best remedy is to take up the trees, and prune away all the coarse and strong roots, leaving only the fibrous ones. The trees, in replanting, should be slightly elevated above the surrounding level, and every precaution should be taken to induce the roots to take an horizontal direction; the branches also should be cut over near the main stem, from whence abundance of strong shoots will break out, of which the future tree must be modelled; this is the best plan I know of for remedying the radical evil just mentioned, the unnatural processes of ringing, boring, and other species of mutilation, being objectionable in every point of As regards the summer shoots, these should be rubbed off in an early stage, when not wanted to form spurs. In this case, break them down at two or three eyes, but not separate them entirely; by doing this there is less chance of the lowermost buds starting, and greater probability of their producing blossom. As dwarf standards. the apple and pear are much benefitted by a dressing of the summer shoots; removing a considerable proportion; shortening others to induce fruitful spurs; and retaining a few healthy shoots where required. to supply the place of decaying branches. If rank and luxuriant growth are observed, the tree should be taken up, the coarse roots pruned away, and replanted above the original level.

Of small fruits, the currant, gooseberry, and raspberry, admit of summer pruning with advantage; the two former, by removing disorderly shoots, and such as would be cut out at the winter pruning; the latter, by removing suckers, and thinning the branches where

they may happen to be crowded.

I cannot close this paper better than by remarking that one of the greatest evils in planting fruit trees, is that of planting in too deep or too rich soil; borders for fruit trees should be made higher than the adjoining ground, and seldom need be more than from two to two and-a-half feet in depth; beneath which the soil should be made impervious to the roots, by whatever means may happen to be eligible. The substratum in all cases should be dry; and, if not naturally so, resort must be had to efficient drainage. In planting, the trees should be slightly elevated, the roots laid out carefully so as to take an horizontal direction, and in dry weather mulching must be resorted to; the soil also should be disturbed as little and as lightly as possible, wherever the roots may be expected to extend; the most





Published by R. Tyns 8, Paternoster Row. May 1. 1841.

wholesome aliment being obtained from near the surface, the consequence of digging, or otherwise disturbing the soil in that situation, would be to destroy or otherwise injure the most valuable portion of the roots.

REFERENCE TO PLATE LXII.

CAMELLIA JAPONICA VAB. PEARSONIANA, Mr. Pearson's Camellia.

NAT. ORD. TERNSTRÆMICEÆ. CLASS MONADELPHIA POLYANDRIA.

This is a seedling, introduced by Mr. Pearson, Nurseryman, of the Hampstead-road, London, and, in our opinion, promises to be a valuable acquisition to this highly ornamental genus. The marking and general colour of the flower has, of course, an affinity to several other varieties of this class of colours. We have not seen it in high perfection. Mr. Pearson, like all commercial men, is anxious to increase it; and the blooms from which our drawing was taken, were from recently worked plants, or from such as were excited into bloom before their natural season. Nevertheless, we believe it will prove a decidely ornamental and distinct variety. Its nearest affinity is with sweetii, Gray's invincible, punctata, rosemunda, &c. We shall, at any rate, have an opportunity of seeing it bloom in perfection before Mr. P. has young plants to offer for sale, and we shall take care to notice it again.

NOTICES OF NEW PLANTS.

COBÆA STIPULARIS, Changeable Cobæa.

Bot. Reg.

NAT. ORD. POLEMONIACEÆ. CLASS PENTANDRIA MONOGYNIA.

A half shrubby, perennial, climbing plant, having greenish yellow flowers, which are produced towards autumn; the blossoms are dull purple when they first open, but soon change their colour. Like the old C, scandens, this plant seems to be well adapted for planting out during summer, where a rapid growth is required; and in such cases they form very conspicuous objects. A native of Mexico, and introduced by the Horticultural Society.

POSOQUERIA VERSICOLOR, Changeable Posoquery.

Bot. Reg.

NAT. ORD. CINCHONACEÆ. CLASS. PENTANDRIA MONOGYNIA.

A very handsome stove shrub, with long, pendulous, fragrant flowers, changing from white to crimson, through the intermediate shades of pink. A native of Cuba, imported by Messrs. Loddiges, with whom it flowered in August 1840. Dr. Lindley says, that he at first referred this plant to the African genus Oxyanthus, but that he now prefers the Posoquery of Guiana; the truth being, that the plant does not belong exactly to either.

IMPATIENS ROSEA, Small Fink Balsam.

[Bot. Reg.

NAT. ORD. BALSAMINEÆ. CLASS PENTANDRIA MONOGYNIA.

A half hardy annual, from the Himalayas; with long, narrow, serrated leaves, and small, single, pinkish flowers. It requires the same treatment as the common garden Balsam.

ÆSCHYNANTHUS MACULATUS, Spotted Blush-wort.

Bot. Reg.

NAT. ORD. CYTRANDRACE ... CLASS DIDYNAMIA ANGIOSPERMIA.

A beautiful stove plant, supposed to be a native of India; but from what part, or when introduced, does not appear. It is cultivated best when fastened to a large piece of rough stick, placed in the pot, the remaining space in the pots being filled up with a mixture of leaf mould, sandy peat, and a small pertion of loam; it requires a strong heat, and damp atmosphere during the growing season.

CŒLOGYNE CUMINGII, Mr. Cuming's Calogyne.

| Bot. Reg.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This species was collected in Sincapore, and sent to the Messrs. Loddiges, by Mr. Cuming; it is a very pretty species, with fine white flowers, having a bright yellow blotch on the labellum. It should be cultivated in a warm and very moist stove; the pots in which it is planted well drained and filled up with turfy peat or sphagnum, to which the creeping stem should be fastened by wooden pegs, leaving the pseudo-bulbs uncovered; the young shoots are liable to sustain injury, if water is suffered to lodge about them.

LÆLIA ACUMINATA, Tapering Lælia.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A most delicate plant, which has bloomed at Sir C. Lemon's, at Carclew, and also at the Horticultural Gardens during the last winter; subsequently, native specimens have been received from Mr. Hartweg, who found it growing on the trunk of Crescentia cujete. the Calabash tree, at a place called Retatulen. Mr. Booth says, the plant at Carclew, had been grown in a pot of decayed vegetable lumps; but that it would possibly have thriven better, if it had been tied to a branch of such as the Cork tree, and suspended in the stove.

CROCUS ANNULATUS ADAMICUS, M. Adam's var. of Crocus annulatus.

Bot. M.g.

NAT. ORD. IRIDACEÆ. CLASS TRIANDRIA MONOGYNIA.

A very early flowering variety of Crocus, with purplish lilac flowers, having a bright yellow centre. It was sent to Spofforth, by Mons. Gay, who received it from Tauria.

HÆMANTHUS TENUIFLORUS, VAR. MOZAMBICENSIS, Narrow-flowered Hæmanthus, Mozambique var. [Bot. Mag.

NAT. ORD. AMARYLLIDACEÆ, § AMARYLLIFORMES. CLASS TRIANDRIA MONO-GYNIA.

This fine plant flowered at the beginning of April, producing upwards of a hundreds blossoms, the head becoming ultimately almost spherical; it had stood the whole year in a hot situation in the stove at Spofforth, having been left dry through the winter. The bulb had been received at Rio Janeiro, from Mozambique, and was sent from thence to the Hon. W. Fox Strangeways, by whom it was

forwarded to Spofforth. It has been successfully cultivated by filling the pot to a considerable height, with old bricks, and pots pounded, putting light loam above, and keeping the round bulb above ground, with its prolonged base under ground-

CROCUS LAGENÆFLORUS; VAR. LACTEUS LUTESCENS, Pale yellow gourd-shaped Crocus. | Bot. Mag.

NAT. ORD. IRIDACE ... CLASS TRIANDRIA MONOGYNIA.

A small variety of Crocus, with primrose coloured flowers, found near Barton Park. Suffolk.

BOMAREA ACUTIFOLIA, VAR. PUNCTATA. Sharp-leaved Bomarea, Speckled var.

[Bot. Mag.

NAT. ORD. AMARYLLIDACEÆ. SUB. ORD. HYPOXIDEÆ. § ALSTRÆMERIFORMES.

CLASS HEXANDRIA MONOGYNIA.

This showy Bomarea was imported by T. Harris, Esq., of Kingsbury, from Caraccas; and having been presented by him to the collection at Spofforth, it flowered in the latter part of the summer of 1840, and perfected its seeds in December. It is not to be distinguished, as a species, from the Mexican acutifolia, but is more conspicuous.

SPREKELIA CYBISTER. The Tumbler Sprekelia.

[Bot. Mag.

NAT. ORD. AMARYLLIDACEÆ. 8UB. ORD. AMARYLLIDEÆ. § HIPPEASTRIFORMES.

CLASS HEXANDRIA MONOGYNIA.

This very remarkable plant flowered at Spofforth, in 1840. The plants thrive in rich alluvial loam, and should be left dry in the winter, in the greenhouse.

MALVA ODORATA. Sweet-scented Mallow.

Botanist.

NAT. ORD. MALVACEÆ. CLASS MONADELPHIA POLYANDRIA.

An upright shrubby plant, from three to twelve feet in height, producing solitary pink blossoms, having a "delicious balsamic fragrance." It is of easy culture, thriving in any good garden soil.

IPOMŒA TYRIANTHINA. Deep purple-flowered Ipomæa. | Paxton's Mag.

NAT. ORD. CONVOLVULACEÆ. CLASS PENTANDRIA MONOGYNIA.

This splendid species of Ipomæa was collected in the vicinity of Real Monte; seeds of it were also received by the Horticultural Society, from Mexico. The specimen was flowered by Mr. Henchman, of Edmonton, who thus describes it :- "The roots, resembling a large mangold wurzel, were potted immediately on their arrival in June, 1840, and put in a little heat, where, in a few days, they began to push out several young shoots from the crown; they were then repotted into rich soil, and well supplied with water: when rooted, their growth was amazingly rapid, the strong shoots often growing from two to three inches in twenty four hours, so that by the end of August they were large plants, and full of bloom. The plants continued in flower till November, when they died gradually down. The flowers, which are very numerous, and produced in clusters on long footstalks, continue open two days, except in very hot weather, but by the second day, their fine rich deep purple hue has disappeared; leaving the ground colour a reddish purple." Mr. Henchman's plants were re-potted in February of the present year, in a compost of rich loam, well-rotted dung, and a little sand, and they are now again large specimens, promising to bloom abundantly by the middle of May. Till they commence flowering they are kept in a gentle heat, and were last season removed to the greenhouse, where they began to bloom, in which situation the flowers were fully perfected. This treatment is very suitable both for the present and all allied kinds; as they flower too late if kept always in the greenhouse, and their colours are not so vivid when grown constantly in the stove.

LOPHOSPERMUM ERUBESCENS, VAR. SPECTABILE. Reddish-flowered Lophospermum, showy variety. [Paxton's Mag.

NAT. ORD. SCROPHULARIACE &. CLASS DIDYNAMIA ANGIOSPERMIA.

A variety of the well-known L. erubescens, with flowers of a delicate rosy pink colour, marked with numerous and distinct spottings of white. It was originated by Mr. Ansell, of the Camden Nursery, Camden Town, in 1838, but did not flower till the following season; it has subsequently bloomed at Messrs. Henderson's, Pine apple-place. Mr. Paxton remarks, that "being only a seedling, and necessarily of a similar nature to L. erubescens, it is of course applicable to the same purposes. We are inclined to believe, however, that if plants of it were placed in the open ground during summer, the blossoms would, by exposure to direct solar agency, be deprived of some of that purity and delicacy, both of the ground tint, and the spots, for which they are so conspicuous. It would be better, therefore, we think, to preserve it in the greenhouse, in a pot of loamy soil, and train it to a cylindrical trellis, on which its flowers would be more easily displayed, than if it were fastened to the refters of the house."

ALLAMANDA CATHARTICA. Cathartic Allamanda. [Paxton's Mag.

NAT. ORD. APOCYNACE.E. CLASS FENTANDRIA MONOGYNIA.

A stove climber, introduced in 1785; but rather neglected till within the last few years. It is of very ornamental character, having large, deep, glossy, green leaves, and rich yellow flowers. Like many other old inhabitants of our stoves, the plant before us appears to create a degree of interest, or disgust, in proportion to the degree of appropriate or improper treatment to which it is subjected. It should be planted out in a rich loamy soil; a tolerably high temperature, and a moist atmosphere, being also essential to its full development.

GENTIANA SEPTEMFIDA. Seven-cleft Gentian. [Paxton's Mag.

A hardy perennial, which was introduced from Persia some thirty years ago, but which does not meet with that attention which it is worthy of. It will thrive in the most ordinary border, and there produce six or more spikes of handsome flowers, greenish or blueish brown externally, spotted within, and having a blue limb. It is desirable to protect Gentians as much as possible from worms, ants, &c., which do not cat them, but by casting up the earth into the axile of their leaves, smother their tender shoots, and cause water to collect around them, which causes serious damage.

CAMELLIA JAPONICA, van. ALBERTII. Prince Albert's Japan Camellia.

[Pazton's Mag.

MAT. ORD. TERNSTRÆMIACEÆ. CLASS MONADELPHIA POLYANDRIA.

This beautiful variety has been received by Messrs. Chandler, of Vauxhall, from China; and as it is now some time since a new variety was introduced from thence, it will undoubtedly be favourably received. Its leaves are of a fine deep green, and have none of that sickly appearance which is peculiar to some; the flowers are perfectly double, of a whitish or light blush, coloured ground, and irregularly striped or blotched longitudinally with reddish pink.

EPIPHYLLUM TRUNCATUM, van. VIOLACEUM, Truncate-stemmed Epiphyllum, violaceous-flowered variety. [Paxton's Mag.

NAT. ORD. CACTACE ... CLASS ICOSANDRIA MONOGYNIA.

A very pretty variety of E. truncatum, imported from Brazil by Messrs. Rellison some years back. It differs from the original species, in the purplish tint, diffused through the blossoms.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

EPIDENDRUM MISERUM.

A miserable little epiphyte, with dull, dingy, greenish brown flowers, not unlike those of E. musciferum. The stems resembling pseudo bulbs, are about half an inch high, the scape, peduncles, and ovaries taken together, are about the same length. From Oaxaca, imported by Messrs. Loddiges.

EPIDENDRUM MICROPHYLLUM.

A curious little plant from Demerara and Berbice, with small, woolly, dull purple flowers. "It and another, constitute a well marked section of this great genus, to which the name of Lanium has been applied, in allusion to the singular circumstance of their flowers being woolly."

BOLBOPHYLLUM IMBRICATUM.

A singular plant from Sierra Leone, approaching closely to the Mauritian B. occultum. The flower stem is about a foot high, stout, and nearly erect, bearing dull purple flowers. The spiral vessels, are of a rich purple colour; in allusion to which, Dr. Lindley states, that he is "unacquainted with any similar case, for, in general, the spiral thread of the tracheæ, is peculiarly colourless, and silvery."

ERIA ARMENIACEA.

Sent to Messrs. Loddiges, by Mr. Cuming, who found it abundant in the Phillipines, in the Island of Negroes, and elsewhere. The stem bears a great number of large apricot-coloured scales, and bracts; the flowers are a dull, dirty brown, not at all pretty.

ERIA LONGILABRIS.

A native of Panay, in the Philippines, whence it was sent to Messrs. Loddiges by Mr. Cuming. It is very like E. bractescens, but is distinguished by its lip not being truncate, and by having three equal wavy ridges prolonged to near the tip of the middle lobe, which is long and acuminated.

MAXILLARIA HARRISONIA, VAR.

The sepals and petals are a clear cream colour, just tinged with violet at the tip of the former. The lip is somewhat paler than the original variety.

BOSSLEA DISTICHA.

A very pretty Swan River shrub, with small leaves, arranged in two rows, slender, drooping branches, and large axillary yellow flowers. It has bloomed in the Horticultural Gardens.

CHOROZEMA SPECTABILE.

Also bloomed in the Horticultural Gardens, where it was sent by Mr. Standish. It is a charming Swan River climber, with pale orange flowers, slightly tinged with crimson, which are abundantly produced at the end of every shoot. "It is admirably adapted for covering a small trellis in a garden pot."

16 REVIEWS.

BEGONIA INCANA.

A striking species of this genus, with the aspect of Peperomia incana, with white flowers, in a small contracted downy panicle. Imported from Mexico, by John Rogers, Esq.

BEGONIA PAPILLOSA.

A plant with fine broad foliage, and handsome white flowers, which sprang up in the garden of the Horticultural Society; no doubt from imported soil.

REVIEWS.

A Treatise on the Cultivation of the Cucumber in Pots. By W. P. ATRES. London: SHERWOOD AND Co.

The present season has brought forth no less than three several Treatises on this subject, notwithstanding that there already existed more perhaps than had been written on any one plant in cultivation. In the introduction to the one before us, we find rather a severe comment on some of those which have preceded it, from which we are informed that the present one differs in

"Its advocating a lower temperature at night and in dull weather, than is generally considered proper; in taking greater advantage of light, than has hitherto been done; in not stopping the leading shoot, until the plants are fully established; and in using water of the same temperature as the soil, particularly in out door culture."

The work contains very clear and distinct information on the construction of a cucumber house, and the mode of cultivation adopted therein; from which portion of the work we make an extract of the following preliminary observations connected with the winter crop.

"The seed having been sown as directed in the preceding chapter, the plants will, by the first week in September, be fit to place in the fruiting pots; these should be in size not less than eighteen inches deep, and sixteen inches wide at the mouth; they must be drained by placing a small inverted pot over the orifice at the bottom of the large one, and round that broken pots or oyster shells must be placed to the depth of three inches; and to prevent the draining material being choked up by the compost, a quantity of moss must be spread over them.

• In planting, two plants must be placed in each pot, but the leading shoot must not be stopped, but be allowed to grow until it reaches the top of the house. On this the success in pot culture mainly depends, for if the plants are stopped, they are thrown into a fruit bearing state before they are sufficiently established, and the consequence is early fruit, but a short lived plant; but if the plants are allowed to grow to the length of ten or fifteen feet before the leading shoot is stopped, a great quantity of true sap will be generated, and the plant will consequently be better able to support a crop, than if it had been allowed to bear fruit before it was properly established. We never stop our plants before they are eight or ten feet long; and we frequently in vineries allow them to grow to the length of twenty feet before the leading shoot is pinched off. The house must be kept at a temperature of 60 degrees through the night, be raised to 65

degrees in dull, and 70 degrees in clear weather, by fire heat; and it may rise to 80 or 90 degrees, or even 100 degrees, with plenty of atmospheric moisture and air in sunny weather. It may be thought that a temperature of 60 degrees is too low for cucumbers, during the night especially, as some excellent practical gardeners contend that 90 degrees ought to be the minimum temperature; but when it is recollected that the mean temperature of the native country of the cucumber is only 72 degrees, it will readily be perceived that the nights must be chilly, and therefore, in keeping so low a temperature, we are only imitating nature. We have shown in the introduction, that the cucumber will sustain no injury at a temperature of 55 degrees during the night, and we are certain the plants will be more vigorous, and continue longer in a bearing state in a low, than if a high night temperature was maintained."

We have also abundant information on propagation, soil, compost, and manure water; on culture in pits, on dung beds, in the open garden, and for seed; the injurious insects and diseases, with sections of a cucumber house and pit, in which the admission of light and of the sun's rays, are fully provided for.

The detailed directions for culture are such as can be recommended to young gardeners with confidence; and even those who are more established in the profession will find it worthy of perusal.

Prize Essay; the Soils of East Suffolk considered Geologically, by Capt. H. Alexander, H.P. Royals, C.F.G.S., for which the Premium offered by W. Long, Esq. was awarded 12th Sept., 1840.

In this brief but most valuable Essay, the author confines his views to such strata as have been brought to the knowledge of man by the examination of cliffs, the sinking of pits or wells, and this principally with reference to the eastern portion of the county of Suffolk. "The prevailing soils, clay, loam, and marls are of so rich and productive a quality that the district is regarded as one of the richest in England, and also one of the most highly cultivated. East Suffolk is treated as having been an estuary or inland sea filled up, as it now is by the deposits of many rivers emptying themselves into it, and this accounts for the richness of its soil. The lowest exposed substratum of East Suffolk is the London clay, but, I believe, that the green sand has been reached at a depth of 700 feet. Superimposed upon this sand lies the chalk, to which attention is first directed. It is said that this vast deposit (chalk) is lime in close affinity with carbonic acid, that chalk is in itself a barren soil, but its chemical combinations with other soils is quite astonishing. Chalk is composed of 55 parts lime, 42 carbonic acid, and 3 of water. Chalk is converted into lime by subjecting it to considerable heat, by which the carbonic acid and water are drawn off. Lime deprived of its acid is caustic, and has a disposition to consume animal substances. This is a fact which every gardener and agriculturist ought to bear in

18 REVIEWS.

mind. We have seen gardeners mixing lime manure and common earth; the lime with various earths in small quantity is very well, but when lime is used freely it destroys all the soluble particles, and renders what would otherwise be a rich compost, of little or no value. Hydrate of lime, or what we term quick lime, when exposed on the surface of the ground, soon absorbs the 42 parts of carbonic acid, and becomes, as before, common chalk.

"Gypsum or sulphate of lime is considered by many people to possess powers almost magical on some soils. The employment of nitrate of potash (saltpetre), and nitrate of soda (cubic petre), have of late been used to great extent, and there appears to be no doubt of the beneficial effects, and it forms a fair presumption that the fertilizing power of our compost heaps may be attributable to the quantity of calcareous nitrate, formed by a due admixture of earth and manure in our usual mode of forming composts. We shall better understand the chemical effects of this operation, if we compare the common process by which saltpetre and nitrate of soda are formed in France, in Poland, and in other places, with the mode practised in husbandry of forming compost heaps.

"In France the plastic stone or Gypsum forms the chief ingredient of their cements, after burning or boiling in iron pans, it is rendered fit for use, and is mixed with other lime, and becomes a mixed carbonated sulphate of lime, part of this, by the process of time, and by the chemical action of the azote, or nitrogen of the atmosphere, is converted into nitrate of lime, consequently the old plaster of buildings is converted into carbonated nitrate of lime. This lime rubbish being placed in pans for the formation of nitre, wood ashes are put into a cask until it is half filled up with the water and is again drawn off. This is separated five times, and the five quantities of water are boiled down in a copper until they will afford crystals of saltpetre."

"Besides the above method of forming nitre, there are other means of obtaining it. It is discovered in marly earths in the East Indies, where it is swept off from the surface, and is also worked from marl pits where their sides face the north east. This is a most important point to observe, because that which has been so exposed does not contain the salt, and this circumstance would induce us to attribute much in this case to the magnetic polar influence. This earth is cut down from the northern face of a marl pit, is thrown into pits lined with clay, and the water into which it is washed is drawn off into tanks, which are defended by walls from the south, and south west winds, and exposed to the north and north east, when the sun exhaling the water, the crystals affix themselves to the sides of the tanks, and these imperfect crystals are what we receive from the east under the denomination of rough nitre. The remarks that would suggets themselves to us are, that in many places we have marl pits

REVIEWS. 19

containing, without doubt, much of the same with those of the East Indies, and though we have not the advantage of intense and continued dry air to absorb the moisture so as to leave the rough crystals, yet by taking advantage of three months of our summer, very great evaporations might be obtained, and the concentrated lixirium boiled down in coppers.

"In Prussia the nitrous earth is prepared somuch after the manner in which we form compost heaps of manure, that I must be excused from transcribing the method as I find it in the Encyclopædia Londinensis. Five measures or parts of black vegetable earth of subterranean caverns are mixed with one measure of wood or vegetable ashes and some straw; these articles beat up with water of dunghills or drainings of yards and sewers, are formed into walls and beds twenty feet long, and three feet wide below, two feet wide at the top, and six feet high. They are covered with light straw, and moistened from time to time, and at the end of the year are fit for washing.

"In Malta they employ the most porous calcareous earth mixed with straw. A layer of this earth and a layer of dung alternately follow each other until they are six feet high; this is sprinkled with water from dung hills, and occasionally turned, it then becomes fit for washing in three years. During the first year the beds are sprinkled over with lime every month.

"In Sweden, a layer of meadow turf, ashes, and lime, and the draining of sewers, stables, &c., are sprinkled over in a similar manner, then a layer of straw is put on, and these layers are continued above six feet; these beds are defended from rain and occasionally moistened with the drainings of stables, &c., they then begin to yield nitre at the end of a year, and continue to yield it for ten years. It is swept off every ten days, and after each sweeping is watered as before.

"In the Canton of Appenzel, they take advantage of the situation of their stables, which are built on the sides of mountains to have a trench under the floor, into this trench they cast porous earth, and empty it once in three years, thus obtaining a ton of saltpetre from an ordinary stable. In comparing these and similar modes of obtaining nitre with our common practice of raising compost heaps, we are struck with the coincidence that both appear to be managed for a like purpose, and if so, that in the proportion which we raise nitrate of potash (saltpetre), and nitrate of soda (cubic petre), so is the value of our compost heaps, more or less."

This Essay was prepared and especially addressed to an Agricultural Association, it is, nevertheless, in every respect, applicable to the gardener, who may be said to be an agriculturist on a limited but more refined scale. It is replete throughout with interesting facts of first-rate importance in gardening, which we may probably resume at a future time.

MISCELLANIES.

The hybridization of the Gloxinia is becoming an object of some interest among cultivators; and since the addition of the splendid G. rubra, a wide and extensive field has been opened, to which we may with confidence look for something as superior to what we at present possess, as the kind just named was to all that had preceded it. There is nothing in this supposition on which the charge of its being chimerical can be sustained; but everything to encourage and stimulate those who have the means at hand, to set about and diligently prosecute, what we have the strongest proofs will ultimately be successful. The Dahlia, the Pansy, the Calceolaria, and the Geranium are familiar instances, in which art has been the means of eclipsing the same plants as they existed in a state of nature; and the limits to which this may be carried by the hand of man is unknown, and, therefore, virtually unlimited. What has already been done with the Gloxinia, whilst we were not in possession of the late splendid acquisition, may be regarded as an earnest, a kind of first-fruits of what will follow. Fortes fortuna juvat.

In growing cucumbers for seed, we have invariably found them to produce seed more plentifully when grown in rather poor soil, than when in very robust health; indeed, from plants in pots it is difficult to obtain seed at all, and for this reason, we have, for some years past, planted out a certain number of plants, and trained them to a south wall, to obtain seed from. In doing this, we plant out well-established plants, not later than the first week in June, and train them without stopping the leading shoot, until they are well established, say six feet in height, and without permitting them to produce either flowers or fruit. The leading shoot is then pinched out. This will cause them to produce strong lateral shoots from the uppermost buds, from which two of the most perfectly formed fruit must be chosen to produce seed. In speaking of impregnation in a former page, we have stated it to be unnecessary for the production of fruit, but indispensable for the production of seed; therefore, to make assurance doubly sure, it will be better to impregnate the flowers, five or six different times, and with a fresh male flower each time, so that in case the farina from one failing, that from another may take effect. After the seed fruit begin to swell, all the secondary fruit and male flowers must be regularly removed, so as to concentrate the energies of the plant in the fruit retained, and bring the seed to the greatest perfection; and care must be taken to preserve a good breadth of foliage in as healthy a state as possible. The plants must be occasionally watered with liquid manure. The fruit may remain on the plants until the end of September, they may then be cut off, the seed taken out, and washed, dried, and preserved in the usual manner. -Ayres on the Culture of the Cucumber.

By a recent conversation which took place in the House of Lords, it appears that a further portion of the Regent's Park is to be thrown open to the public; and also that it is the intention of the Government to carry out as quickly as possible the intention which was expressed some time since of forming a Park on the east side of the Metropolis. One can hardly imagine any public improvements which it is possible to effect, that will be productive of such beneficial results as the one in question; for independently of the effect which is produced in a moral point of view, there is nothing so much to be desired, as that of affording the humbler classes in se densely populated a city as London

the means of refreshing and exhibarating those physical powers, which its densely crowded state is in every way calculated to deteriorate, if not to destroy.

CLINTONIA PULCHELLA.—As many find it difficult to get the seeds of this beautiful little flower to germinate, I recommend the following treatment as both easy and certain. Let the seeds be sown on fine soil in a shallow pan, and covered lightly, and a little sand sifted on the surface; after about a week, water them through a fine syringe till the water rises to the surface, which keep up to the mark, and the plants will rise freely without heat.—W. Dumbrill, Beechland.

A single tree often serves to answer different ends in view. It may form a connection between separated parts; interrupt straight lines; sometimes direct the eye to an interesting object, and very often conceel a point of view. When placed on a lawn it is a simple and always a natural object.

The first Exhibition of the London Horticultural Society, took place on the 15th ult., at the Chiswick Gardens. The show of plants was rather above the average of former seasons; and owing to the attraction thus held out, together with the fineness of the weather, the attendance of visitors was greater than on some former occasions. Those who have never had an opportunity of witnessing these Exhibitions, can form but an inadequate idea of the magnificent effect which they produce; far surpassing any other thing of the kind; and, indeed, it would be unreasonable not to expect such to be the case, when it is considered that they form the central point to which flow all the most beautiful, and interesting horticultural productions, which the wealth of the Fellows, and the talent and perseverance of professional men can command. Among the plants which were likely to prove most interesting, were the splendid collections of Calceolarias, Heaths, and Pelargoniums. Among the latter were three seedlings of merit, which were named Captivation, Rising Sun, and Prince of Waterloo, the former of these belonging to the rose coloured class, the latter were in colour approaching to scarlet. In the collection of stove and greenhouse plants, were some of great merit, of which Tropæolum tricolorum, Helichrysum humile, and Chorozema Henchmanni, deserve especial mention, it being rare to meet with specimens such as those exhibited. Ixora coccinea, Lechanaultia formosa, Fabiana imbricata, Azalea, Danelsiana, lateritia, indica splendens, and Smithiana coccinea, were exceedingly fine; also a new Azalea gledstanesii, with fine shaped pure white flowers, delicately marked with crimson; and a seedling Cineraria, called Victoria regina, having the outer half of the petals deep crimson, with the centre of the flower white. In the fruit tent were some good Pines; one called Buck's Seedling, was upwards of nine inches in height, of a conical shape. There were also some very good bunches of grapes and melons. The plants in the great Conservatory are some of them growing vigorously, others are not looking so healthy as they did some months back; the cause of this, appears to be the intensity of light and heat, to which they are subjected in sunny weather, no provision having been made in erecting the house, to provide any kind of shading. The most interesting plants in flower were a species of Dolichos, from Port Augusta, with pink flowers, Pimelia spectabilis, a most beautiful kind, with extremely large heads of pink flowers. Pentlandia miniata, a small bulbous plant, with scarlet tubular flowers, Chorozema Dicksonii, Bossiwa linophylla, and Lechanaultia biloba, with blossoms of celestial blue.

At the Exhibition held in the Chiswick Gardens, on the 15th ult., the Medals were awarded as follows:-

The Gold Knightian.—To Mr. Green, gardener to Sir Edward Antrobus, for a collection of 50 store or greenbouse plants; Mr. Butcher, gardener to Mrs. Lawrence, for ditto; Mr. J. Davis, gardener to Sir S. Clarke, for a miscellaneous collection of fruits; Mr. W. Barnes, gardener to G. W. Norman, Esq., for a collection of 20 Cape Heaths.

Gold Banksian.—Mr. Cock, of Chiswick, for a large collection of pelargoniums; Mr. Barnes, gardener to G. W. Norman, Esq., for a collection of 50 greenhouse and stove plants; Mr. Hunt, gardener to Miss Trail, for a collection of ditto ditto; Mr. R. May, gardener to E. Goodhart, Esq., for a collection of 6 Cape Heaths; Mr. Falconer, gardener to R. Palmer, Esq., for greenhouse Azaleas; Mr. E. Davis gardener to Lord Boston, for a miscellaneous collection of fruit.

New Gold Banksian.—Mr. Catleugh, of Chelsea, for a large collection of pelargoniums; Mr. C. Young, of Epsom, for collection of 20 stove and greenhouse plants.

New Large Silver.—Mr. Gains, of Battersea, for a large collection of pelargoniums; Mr. Catleugh, for small collection of ditto; Messrs. Lane and Son, for collection of roses; Mr. Catleugh, for herbaceous calceolarias; Mr. Catleugh, for shrubby ditto; Mr. Jackson, of Kingston, for collection of 50 stove and greenhouse plants; Mr. Jackson, for collection of 20 Heaths.

Large Silver.—Mr. Slow, gardener to W. Barker, Esq., for pelargoniums; M1. Cock, for ditto; Mr. Green, for herbaceous calceolarias; Mr. Green, for shrubby ditto; Mr. Venables, gardener to W. Harrison, Esq., for collection of 20 stove and greenhouse plants; Mr. Bruce, gardener to B. Miller, Esq., for 6 Heaths; Mr. Hunt, for collection of 6 stove and greenhouse plants; Mr. Butcher, for stove and greenhouse climbers; Mr. Bruce, for collection of 6 stove and greenhouse plants; Mr. Butcher, for collection of 20 Heaths; Mr. C. Judd, gardener to G. Knott, Esq., for pine apples; Mr. Chapman, of Vauxhall, for grapes; Mr. Green, for seedling caleeolarias.

Silver Knightian.—Mr. Bromley, gardener to Miss Anderson, for pelargoniums; Mr. Willmer, of Sunbury, for tulips; Mr. Dowson, gardener to W. Leaf, Esq., for hydrangeas; Mr. Venables, for cut flowers; Mr. Venables, for collection of six stove and greenhouse plants; Mr. Upright, gardener to G. Ridge, Esq., for do.; Mr. Green, for tall cacti; Mr. Venables, for collection of twenty Cape Heaths; Mr. Bruin, gardener to R. Gunter, Esq., for grapes; Mr. Mann, gardener to Mr. Bisshopp, for cucumbers; Mr. Green, for melons; Mr. Mann, for pine apples; R. Brook, Esq., for apples.

Silver Banksian.—Mr. Hunt, for pelargoniums; Mr. Venables, for cut flowers; Mr. Gains, for seedling geranium (Captivation); Mr. Catleugh, for do. (Prince of Waterloo); Mr. Mountjoys for heartscase; Mr. Kyle, gardener to R. Barclay, Esq., for a seedling erica; Mr. Upright, for greenhouse azaleas; Mr. Appleby, gardener to T. Brocklehurst, Esq., for pine-apples, Mr. Mann, for do.; Mr. Bruin, for do.; Mr. Baldwin, for apples and pears; Mr. Hardy, gardener to J. Jarrett, Esq., for a melon; Mr. Sellers, gardener to S. Watkins, Esq., for grapes; Mr. G. Hall, gardener to W. Harcourt, Esq., for do.

QUERY.—Will you be so kind as to give some account of the Calceolaria, as it regards its production from seed, the manner of treating cuttings, and the method of preserving and saving the seed, through the medium of your excellent periodical.—O, Y. R.

[The cultivation of the Calceolaria from seed is a simple process, requiring

nothing beyond the ordinary attention paid in such matters, that is, to sow the seeds in pots or pans of light earth, and place them on a slight hotbed; the seedling plants should be pricked of as soon as they have attained a sufficient size, and afterwards potted singly into small pots, and subjected to the ordinary treatment of greenhouse plants. Seeds are for the most part produced in abundance. Our correspondent will find several papers on the growth of Calceolarias in the early volumes of the Floricultural Magazine.—ED.]

QUERY.—SIR,—Having been a subscriber to your valuable Magazine (which is monthly improving) over since its commencement, I take the liberty of begging you or some of your correspondents to furnish me with the best method of destroying caterpillers on gooseberry bushes, having some that are literally of these destructive insects. An early answer will greatly oblige, W. Q. C.

[We beg to thank our correspondent for the notice respecting the hardiness of Pentstemon gentianoides, in the eastern part of Norfolk. We believe the plant in question has been found generally so. Some of our correspondents will, we trust, answer the query respecting the destruction of the caterpillars.—Ed.]

QUERY.—Would you be so kind as to inform me, through the medium of your Magazine, whether there is any work published, which will enable a young beginner to pronounce the Botanical names of plants correctly; and if so, who is the author, and what is the price. An answer in your next number will much oblige.—W. F.

[We know of no book which will answer our correspondent's purpose better than Paxton's Bolanical Pocket Dictionary, which has been previously noticed in this Magazine. In this work the whole of the scientific names are accented in a manner which renders them comparatively easy of pronunciation. The price of the work is also moderate.—ED.]

MONTHLY CALENDAR.

FLOWER GARDEN.-Preparations should be made for planting out, without delay, all kinds of half hardy and other showy plants intended for decorating the Flower Garden during the summer and autumn. Annuals that have been raised in pots, and have not yet been planted out, should not longer be neglected. In disposing them, due regard should be had to a proper arrangement of height and colours, as a great portion of the beauty of the garden will depend on this; support those plants which require it with neat stakes, and secure others of trailing habit on the surface of the soil; cuttings of double wallflowers, rockets, and other perennial plants, may be put in, also pipings of pinks and heartsease, choosing a shady and damp situation, but not covering with hand glasses; seeds of biennials should be sown toward the end of the month for flowering next year: take up the roots of bulbs when the foliage is matured, and lay them in a reserve ground to ripen. Sow a few more annuals for a succession; mow grass lawns, roll gravel walks, hoe, weed, rake, and otherwise destroy weeds; thin advancing crops, shelter and water choice flowers, destroy insects, examine frequently what may be done to promote the growth and beauty of the plants, and pay particular attention to neatness and order.

PLANT STOVE.—Remove the hardiest kinds of plants into the greenhouse, which will be partially emptied, and these will be benefitted by a sojourn of two or three months there; shift all fast growing plants as they require it, and thin out, and carefully tie climbing plants; cease to water bulbs after they have perfected their foliage, and remove them to the greenhouse; propagate by every available means whatever it may be desirable so to do; syringe freely, and sprinkle the walks frequently during sunshine, to keep up a due degree of moisture in the atmosphere, give air freely, and shut up early in the afternoon, which will render a less amount of fire heat necessary. Frequently repot balsams and other tender annuals; also gloxinias, gesnerias, treviranas, and gloriosas. Keep up a strong heat and plenty of moisture in the Orchidaceous stove; remove all dead leaves, and attend to neatness.

GREENHOUSE.—Admit air freely, as directed last month; attend to the plants that they do not suffer for want of water in hot drying weather; remove the more robust kinds, and duplicate plants to the open air, in a shaded situation, and place them on beds of coal ashes; retain the more delicate and tender species; propagate by cuttings, seeds, and every available means.

KITCHEN AND FRUIT GARDEN .- Commence (if not already done), and vigorously prosecute the disbudding and summer pruning of all fruit trees; if they are infested with aphis, pick off the affected leaves, and wash the trees with tobacco water; apply frequent showers of water with the garden engine, choosing warm and calm weather for the operation. Water strawberries, whilst the fruit is swelling, if the weather is dry and hot; mulch recently planted fruit trees, and attend to watering them. Pay strict attention to every means of lessening the number of insects Sow in succession peas, beans, kidney beans, and spinach. Sow turnips for succession, in the first week, and afterwards for a full crop. Sow radishes, lettuce, and salading; endive about the 20th for autumn and winter. Transplant celery, brocoli, cauliflowers, cabbages, lettuce, and cucumbers under hand glasses. The autumn crops may frequently be planted between others advaucing to maturity, so as to keep the ground from being idle. Thin, hoe, and water, in cases where they are required. Cut and dry herbs for winter use. In planting, choose showery weather, or if such do not occur, do it towards evening and water freely. See Calendar for May.

FORCING GARDEN.—Maintain a due temperature in the pine stoves, so as to swell off those fruit which are advancing, and also to make good plants for succession; water moderately, but frequently, omitting those which are ripening their fruit; shade, if the sun is very hot; admit plenty of air in vineries and peach houses where the fruit is ripening, and prevent any accumulation of moisture. Plant out cucumbers and melons on hotbeds for a succession of these fruits; water the advancing crops of melons very moderately until the fruit is set, and a little advanced, it may then be applied more freely; supply air abundantly, opening early in the morning and closing in the fore part of the afternoon; discontinue covering at night towards the middle of the month, if the weather is mild.

PLANTATION.—Fell oak coppices, if not done before. Prune the side shoots of trees whilst young, so as to preserve and encourage a leading shoot; stake those planted and water when necessary. Destroy all advancing weeds before they grow sufficiently to disperse their seeds. See Calendar for May.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXII.—JULY, 1841.

SUGGESTIONS ON THE GROWTH OF LUCULIA GRATISSIMA.

BY AN ADMIRER OF SHOWY PLANTS.

Amongst the numerous Plants which are highly deserving of more universal cultivation, and a greater degree of assiduity and attention than is generally bestowed on them, the Luculia gratissima stands conspicuous. Although the species is to be met with in many collections, having been introduced to this country since 1823, it is however but rarely seen in that state of perfection of which it appears susceptible; being for the most part subjected to an ordinary routine amongst miscellaneous plants, not at all consonant with it in habit, or disposition. The remarks that follow are not offered as holding out a mode of treatment which has been generally acted on in practice; but they are a series of ideas which some little connexion with the plant, and rather a close examination of its habits and characteristics, seem to suggest as a means likely to raise this really deserving plant in public estimation; in order that some of the skill and practice so successfully applied in cultivating other classes of plants, may be brought to bear on this truly beautiful and odorous plant.

In works professing to treat of the cultivation of plants, Luculia is recommended to be grown in a soil composed of an equal mixture of light turfy loam and peat, a temperature of from 55 degrees to 60 degrees, has also been recommended, and that a season of rest should be afforded the plant during the winter months. As far as I have had an opportunity of putting these directions to the test, they have been found quite suitable to the growth of the plant, in an healthy and proportionably vigorous manner, especially if carried out in all the minor details with care and judgment; but still I am inclined to think that a condition more nearly approaching to perfection, is possible to be attained.

In the spring of 1839, a small plant was placed under my care; it was re-potted in the kind of soil just named, and kept in a small

D

house, in which the atmosphere was rather moist and confined, and the temperature averaging about 60 degrees; here it produced, during the summer, a fine head of its delicate pink, highly flagrant blossom, and being removed to a dried atmosphere, continued for some time in blossom, perfuming the whole atmosphere of the house with its delightful odour. Since the period in question I have had no opportunity of watching the habits of this plant; but having closely observed its progress and mode of flowering at that time, an idea has struck me, that the treatment usually adopted with the view of producing dwarf and well grown Hydrangeas, would, with perhaps a little modification, be found equally suited to the Luculia. In this I may be in error; but the idea appears sufficiently reasonable to merit a fair trial with those who have the means within their reach; and I think the exercise of a little judgment in the execution of it, would be rewarded by one of the most beautiful objects that could decorate either the drawing-room or greenhouse.

The course of treatment which I should recommend, would be to take off the tips of the strongest shoots having plump buds at their extremity. This should be done during the summer, as early as possible; and, after striking them in a gentle heat, they should be potted singly into pots of rich soil, and kept near the glass in the moist atmosphere of a dung frame. Here, if well supplied with water, and kept growing at the root, they would manifest but little inclination to elongate, but would perfect their foliage and prominent buds; afterwards they might be removed for a short time to a stove, and gradually inured to the temperature of a warm greenhouse, and the supply of water gradually reduced. The foliage would in a short time decline, and after that a very little water should be given until they manifested signs of growth in spring; they should then be re-potted, and kept in a close frame, and subject to the treatment of the Hydrangea. shall be happy to hear that some one has acted on this suggestion. and found himself rewarded.

HOW TO PREVENT THE RAVAGES OF THE CATER-PILLAR ON GOOSEBERRIES, AND ALSO THE MEANS OF DESTROYING THEM AFTER HAVING BEEN ALLOWED TO INCREASE.

BY F. R. TOPSHAM.

A subscriber, W. Q. C., wishes to be informed of the best method of destroying the Caterpillar on the Gooseberry (Ribes grossularia.) There are three sorts of these destructive enemies; the small dark green with black spots—is the most prevalent on the leaf, and a light

green with a white stripe has lately done much injury to the fruit by boring holes in them, and causing them to shrivel and fall prematurely from the bush. The best advice I can give by way of prevention, is to examine the bushes well when they receive their winter pruping, and scrape or rub off all appearances of the ova or larva of insects from the stock and under sides of the branches, keeping the ground under and around them loose by frequent deep forking [?]; this, should there be frost, will tend to destroy any which may be in the pupa state in the earth. Should this, however, prove ineffectual as a preventative, let the bushes be examined well in the month of May, on the first indication of the presence of the caterpillar: this will be seen by the leaves having minute holes in them not larger than the puncture of a pin. On the under side of these leaves the young worms are congregated; strip them off and destroy them. Should they, however, be allowed to increase in size, they will speedily spread over the whole bush, when the various methods recommended by washes, &c. will be found inadequate to their removal. Should they have attained that state with your Querist,* the best plan he can adopt isto place cautiously under the bush a large tea tray or broad shallow pan, taking care not to touch or shake the bush in the slightest degree, as the caterpillars are easily alarmed, and then adhere so firmly by their suckers or hinder legs that they cannot be shaken off; if they appear to be feeding fearlessly, give the stock of the bush a sharp and quick stroke with a stick, when the greater part will be disengaged and fall on the tray or pan; this may be repeated if necessary, giving time between each stroke. If this is followed up for a few days, it will be found more efficacious than any of the washes or mixtures recommended for their destruction in the ova or chrysalis state. Nature has so protected them at that period, that their coverings are impervious to any injury from external causes-except frost.

Many persons are in the habit of destroying small birds in their gardens; this is productive of serious consequences to the fruit, caterpillars being the natural food of many species of these useful creatures, who, during the season of nidification, clear our gardens of myriads of insects, which would do far more injury than the small quantity of fruit eaten by the birds. On two successive occasions I have witnessed with astonishment the speedy clearance of my bushes by cuckoos, naturally of timid and retiring habits; they fearlessly visited the garden, morning and evening, and would suffer themselves to be approached within two or three yards, whilst busily

I rather expect these remarks will come too late to help your subscriber this year, as in the course of nature the caterpillars will have become full fed, and undergone their change before this meets his eye.

engaged in their useful labours, and thus in a few days a large garden has been entirely cleared. When the gardener first mentioned their visits, I rather doubted him, but had afterwards several opportunities of seeing them.

REMARKS ON THE EXHIBITION OF THE SOUTH LONDON FLORICULTURAL SOCIETY.

The Surrey Zoological Gardens were, on the 15th of June, the scene of a miscellaneous exhibition of horticultural productions, under the auspices of the Royal South London Floricultural Society. The day was delightfully fine, and owing to the many attractions which the gardens present, the attendance of visitors was very numerous. The exhibition may be regarded as supplying the same kind of gratification and amusement, to one class of persons, which that at Chiswick does to another; and, although no comparison can be fairly drawn between them, either as regards the quantity of plants exhibited, or their general appearance and quality, yet there were many subjects which evinced considerable skill, and perseverance, of which the florists' flowers may be mentioned as instances. If it were for no other purpose than supplying the class of persons mentioned with the means of rational and innocent amusement, this Society deserves well of the public. In importance it is even now second only to the great shows at Chiswick, being supported by some of the principal growers, both by their personal exertions, and also by largely contributing to its exhibitions. In detailing some of the leading features of this exhibition, we shall give precedence to Flora's Queen-the Rose; of this universal favourite there was rather an extensive display of well expanded blooms, contributed chiefly by Messrs. Wood, Denyer, Paul, Willmer, Hooker, Dennis, Atlee, and Hancock, of Iver. In a small stand, exhibited by Mr. Hooker, the following were very fine: - Duke of Sussex, William Jessie, Comte de Paris, Hooker's Seneca, and Mansais. Of Pelargoniums, Messrs. Gains and Catleugh contributed some of their splendid specimens; some also of considerable merit were exhibited in the amateur classes. The seedlings were not a very attractive part of the exhibition; Mr. Gains' Rising Sun, and Captivation; Pamplin's Camilla, and Enchantress; and Lyne's Princess Royal, all shown at Chiswick, were the best. Mr. Tansley, of Croydon, exhibited two, named Beauty of Croydon, and Norwood Gypsy, both very similar to Dennis's Perfection, but scarcely so good, being deficient both in form and character. The collections of Heaths and Greenhouse plants contained some interesting plants, but, as collections, were

not very striking. The display of florists' flowers was very good; Messrs. Willmer and C. Knight's stands of Pinks appeared very fine; as were two seedlings shown by Mr. Agate, of Croydon, and named Hero of Croydon, and Sir R. Peel; another shown by Mr. Neville, of which the name did not transpire, was particularly fine. Of Heartsease and Ranunculus, there was a considerable number among the former, those of Messrs. Henchman and Bridges, and in the latter, of Mr. Alexander, of Kingsland, were the most striking. A tray of bulbous Iris, from Messrs. Lockhart, proves this flower to be worthy of more general cultivation, as nothing can exceed their beauty or the endless variety of their colouring.

In a tent appropriated to them, were some well grown vegetables, and a few dishes of fruit. Mr. Myatt exhibited two new seedling Strawberries, named British Queen and Prince Albert; but their general appearance did not indicate anything very different either in form or size, in form they resemble the old pine. The hybridization of fruit, with the view of obtaining superior varieties is a laudable object; but, whilst existing varieties of merit are so numerous, great caution should be exercised in proving the merits of new kinds, before they are introduced to the public.

NOTICE OF THE SECOND SHOW OF THE LONDON HORTICULTURAL SOCIETY.

BY THE EDITOR.

The Second Exhibition of the Horticultural Society of London, took place on the 12th of June, at the Chiswick Gardens. The display of flowers was exceedingly fine, and, notwithstanding the coldness and unpromising appearance of the weather in the early part of the day, the attendance of visitors was very numerous; this must be truly gratifying to those who wish well to such rational and delightful sources of amusement and instruction, affording, as it does, a proof of the exalted and refined taste, which is rapidly spreading amongst the various classes of society. In endeavouring briefly to enumerate some of the most attractive subjects, a matter of some difficulty presents itself, where all were good, in fixing upon those which were more particularly so. If any one department of the exhibition attracted more attention than the rest, we think the collection of Roses found the greatest number of ardent admirers; the throng, which without intermission, was continually pressing around them, and the evident gratification manifested by the visitors, may be regarded as a proof of the particular favour or preserence with which this exhibition was regarded. The Rose may be justly styled the "Queen of Flowers." The orchidaceous plants were also deserving of especial notice, there

being a considerable quantity of fine well grown specimens; among the most beautiful kinds exhibited, were plants of Cattleva intermedia, and Mossiæ, Saccalobium guttatum, Cirrhæa viridipurpurea, Ærides adoratum, Acanthophippium bicolor, and Vanda teres, from the collection of S. Rucker, Esq., of Wandsworth; magnificent specimens of Dendrobium fimbriatum, and Cœrulescens, a species of Acropera from Mexico, Cymbidium Gibsonii, a most beautiful and delicate species of dwarf habit, Leptotes bicolor, and Trichopilia tortilis, from Messrs. Rollison; the beautiful Cattleya Aclandiæ, from G. Barker, Esq., Schomburgkia tibicinis, from Mr. Cragg, Epidendrum macrochylum, from Mr. Hunt, Saccalobium præmorsum, and a gigantic plant of Gongora, from Mr. Lawrence; besides these, there were others of nearly equal beauty, and being in considerable variety, afforded great interest to the lovers of this tribe of plants. The collections of Pelargoniums were very fine, and evinced great skill and assiduity in their cultivation. Among the best varieties in the various collections were, Florence, Bridesmaid, Comte de Paris, Lord Auckland, Grand Duke, Lady Bridport, Coronation, Orange Boven, Una, Lady Mayoress, Priory Queen, Joan of Arc. Of seedlings, as might have been expected, there was a large assortment, some possess ing qualities which render them desirable, but by far the larger number of them were undeserving of any notice. A pan exhibited by E. Foster, Esq., contained not only the best assortment, but by far the handsomest and most valuable kinds, which, we regret, were not named; of those to which names were attached, the best were Gain's Rising Sun and Captivation, Wood's Ivanhoe, Lyne's Princess Royal, Lady of Lyons, and Veitch's, Fair Maid of Devon, one of the best exhibited. Mr. Catleugh also exhibited his Prince of Waterloo, and a few others of merit not yet named. The specimens of Heaths were mostly very fine, as also were the collections of stove and greenhouse plants, amongst the latter were fine blown plants of Fuchsia fulgens and Ixora coccinea, from Mrs. Lawrence, and of Lechanaultia formosa, Gloxinia rubra, Cactus Jenkinsonii, and Ackermanni, from Mr. Green, gardener to Sir E. Antrobus, Among the single specimen plants were Elichrysum humile, Gloxinia violacea, and Polygala oppositifolia, particularly fine; also a plant of Fuchsia cordifolia, with long pale pink flowers, having the calyx green; this will be turned to some account in the hybridization of these plants. The Fruit Tent was by far the most unsatisfactory part of the exhibition, indeed, the fruit was both in quantity, and, generally speaking, in quality, below mediocricy. Of Pines, there was a considerable number, but for the most part these were either unripe, or defective in form, or with crowns almost large enough to produce fruit; one of the best in this class was an Otaheite Pine, exhibited by

W. Leaf, Esq. Among the grapes was a splendid dish of Willmot's new black, exhibited by Mr. Willmot; also a seedling by Mr. Chapman, named "Prince Albert." The other dishes of Grapes, consisting chiefly of black Hamburg's, Muscats, and Frontignans, were of various degrees of merit, many of them unripe, and still more badly coloured.

REMARKS ON GARDEN ARCHITECTURE...

BY M. R.

In Paxton's Magazine of Botany for June, is an article by the Editor, on the subject of Garden Architecture, in which the hothouses and planthouses of Great Britain are condemned, as betraying a want of taste, and in appreciation of the objects to be attained; extravagant notions of economy and ignorance, or neglect of the true principles of plant culture. In support of this condemnation, the first definite charge is made against the ordinary sloping roofs, so prevalent throughout the country; the faults of which are pronounced to be, a lack of characteristic proportion, and of chaste and appropriate ornament. "Nothing," says Mr. Paxton, "can be more easy than to prove that these kind of houses are the reverse of beautiful. are destitute of one of the main constituents of beauty-symmetrical proportion; and if seen from the end, present a contour of the most displeasing figure. They have invariably an ugly wall in the inside. and the same disagreeableness of outline which marks the exterior is equally apparent when the observer is within the house. is another charge brought against them; their slope is too long, too steep, too flat, or too undiversified, to accord with any true idea of beauty."

In the case of houses in which some regard has been paid to architectural taste, another class of faults present themselves; the unsparing employment of masonry is in such cases an evil of a serious nature, inasmuch as it tends to subvert a law, of which the experience of all attests the accuracy, and on the inviolable preservation of which so much depends, namely—" that everything should be avoided that in any way intercepts the passage of light through the roof and sides." Such houses have other glaring defects: disproportionate strength and massiveness, being incongruous with the airiness and buoyancy which is required, and which raise an image rather of an endeavour to enhance the attraction of the scene, than of a necessary screen against the inclemency of the weather, whereby we have a continual remembrance of the ungenial and inhospitable nature of our climate.

Whatever force these remarks may have in the case of planthouses, erected in either a flower garden or pleasure ground, I cannot con-

ceive them applicable to those used for culinary purposes; or, in other words, those whose station is decidedly in a kitchen garden: neither is it at all probable, that even for the cultivation of plants. houses constructed with a regard merely to their architectural appearance, will present any advantages over those of more ordinary appearance, whilst the economy of simple structures will go far to confirm them in the estimation of the generality of those whose avocations lead them to form any decisive opinion in these matters. Whilst, however, it does not appear very clearly that there exists any necessity for reforming or altering the general appearance of houses devoted to forcing and such matters, there is certainly very much that may be done to improve the appearance of those structures which, from their situation, have a powerful effect on the appearance of the pleasure ground or parterre; and it is to this part of the subject, that the remarks in question apply with peculiar force. What, for example, in such a situation, can be more unsightly than a planthouse of considerable elevation, with a plain perpendicular back wall, and a long glass front sloping in one direction to the other wall that supports it? And when again will the eye of taste meet with greater offence, than in the heavy erections half stone or brick, and half glass, additionally shaded and darkened with pillars and pilasters, and other appendages of a purely architectural character.

The general appearance of houses erected in such situations, and for such purposes, should be that of elegance, lightness, and gracefulness; and for this purpose, such buildings ought not to bring into use masonry of any description more than a foot or two above the level of the surrounding surface; the supporting pillars should be of a light description, and used as sparingly as the stability of the structure will allow: the construction of the sashes should be carried out with the same point in view; and as regards form, that which is most in unison with the scenery of which it is intended to form part, is the most rational that can be adopted.

[We ought to state here, that we have seen Mr. Paxton's culinary hothouses, for the growth of pines, vines, &c. &c., both at Chatsworth and other places, and think them well adapted for forcing generally. We also think them more elegant, and perhaps as economical as any structure whatever, however primitive their form.—ED.]

HOW TO PRESERVE GREENS, BROCCOLI, &c., &c., THROUGH THE WINTER.

BY HORTULANUS.

Any remedy in gardening that will meet an evil which is of common occurrence even in mild winters, but more especially when visited by intense frosts and violent winds, such as we have experienced during the greater part of the last winter, must be regarded as beneficial. The remedy to which I refer is that of preserving Greens against the effects of frost; the practice is one which I have followed for some years, and am now more than ever convinced of its advantages. Common Broccoli, Brussels Sprouts, Savoys, and indeed Greens of all kinds, when they either naturally or otherwise have become tall in the stems, I have them all bent, so that the heads or crowns hang downwards; this operation is performed in the autumn, before the growing season is quite over, and the fractured part of the stem becomes grown over and healed before the return of By the heads or crowns of the plants being thus bent downwards, the rain and snow, the frequent, and sudden changes of temperature are all less felt and less injurious, when the crown is turned downwards as thus described, than when open and exposed to every variation of temperature. The same practice, under different circumstances, might not be followed by similar results as those which I have experienced; but the principle is good, and I think deserving a trial, by those who find any inconvenience from their winter Greens suffering from frost.

ON BLOOMING DENDROBIUM AGGREGATUM.

BY J. PLANT.

Having been successful in blooming a specimen of Dendrobium aggregatum (Bot. Reg. vol. 20, fol. 1695,) for the last three seasons successively, I send you the particulars of the method by which I have succeeded; should you think it worth a space in your valuable Magazine, it is at your service. The specimen in question is grown in a shallow basket, made of copper wire; this kind of basket I have used some time for Orchideous epiphytes, and find them to answer remarkably well; the basket is lined with sphagnum, (watermoss) and a handful of small crocks, placed in the bottom, it is then filled up with crocks and turf* mixed well together; in placing the

^{*} The turf I use has been laid together in a narrow ridge for some time, and the sod is taken about three inches in thickness, from moory districts, where the wild heaths are found to flourish.

plant let it be a little higher than the level of the basket; when fixed, smooth and make firm the surface, and finish off with a good watering. The most appropriate season to move the plant, is at the commencement of its growth, though with caution it may be performed at any time, except when in bloom.

In the autumn, when the last growths or pseudo bulbs assume a brownish appearance, gradually lessen the supply of water, until the pseudo bulbs appear shrivelled, when I give no more. In February or March I pay attention to the bloom stems bursting from the sides of the pseudo bulbs, and on perceiving them, I commence watering, and gradually increase the supply, so that I water very freely until autumn.

In the hothouse where the plant is grown, the temperature varies from 65 to 85 degrees; shading is not requisite, but rather exposing to the influence of the sun, in order to ensure the perfect ripening of the pseudo bulbs, which require to be at least two years old before they shew flower. During the last three weeks our plant has made a beautiful appearance, having one stem containing twenty blossoms, and the others fifteen or sixteen each.

Belonging to the same division, is Dendrobium Jenkinsi, Bot. Reg. vol. 25, fol. 37, of which under precisely the same treatment, we have a specimen now beautifully in blossom.

Milbert Villa, near Manchester,

May 7th, 1841.

[We shall be happy to hear from our correspondent at his convenience,— ED.]

REMARKS ON PELARGONIUMS, WITH A DESCRIPTIVE LIST.

BY T. M.

Among the rapid strides which gardening has made within the last few years, there is nothing more apparent than the increase of a taste for the hybridization and improvement of the flowers which most deserve the designation of "popular," on account either of the ease with which they may be cultivated, or their submissiveness under the fertilizing and fostering hand of man. Various as are the genera which now are brought, in some degree or other, to bear with these remarks; infinite as are the varieties of some of these, and beautiful as are many of them, there is no genus which is more richly deserving of the patronage which it is receiving, than the Geranium. What plant can be better adapted under skilful treatment, to feast the eyes of Flora's voluptuous votaries? and, passing to an humbler

sphere, what is there better calculated to grace and decorate the window of a cottage? The first question might be answered by referring to the splendid specimens which are exhibited at the public shows, and are also to be met with in many private collections; and, in reply to the latter question, the universality and extent to which they are grown in such situations, affords abundant evidence that they are held in no mean estimation; a knowledge too, of their tractable disposition, would lead us to suppose, and more than this, to assert, that even in these humble situations, very much may be done, under skilful hands, towards producing plants, not, indeed, to vie with those to which reference has been already made, but infinitely superior to what even in well attended greenhouses was produced but a few years since.

But whilst it can truly be said, that the Geranium is deserving of the patronage it is receiving, it is also true that of the numerous varieties which are consequently offered to the public, there are some which possess great merit while others possess but a very little. In matters of this kind, those who intend to become purchasers, should take care to inspect for themselves the collections to which access may be had, in order that they may make choice of those kinds only which are really good and agreeable to their particular taste; if this is not in some measure attended to, it is very probable that some portion of disappointment may ensue.

Under this impression, the accompanying list is compiled for the purpose of rendering some assistance to those who may think fit to avail themselves of it: there may be many varieties equally desirable with those now recommended: but these seemed to possess the greatest share of good qualities, whether it might have been in the form or colour of the individual blossom, or the profusion in which they were produced.

Prince Albert, (Gains.)—A very large, well formed flower; the upper petals deep rosy pink, with very large dark clouded blotch; under petals delicate pink; a free bloomer.

Gauntlet, (Gains.)—An exceedingly large light rosy red bloom, with small crimson spots, the centre pale, with pencillings of the darker colour, under petals very broad; a well formed and very showy flower.

Grand Duke, (Gains.)—Bright rose, with dark cloud and pencillings extending beyond; under petal, tinged with purple; a desirable variety.

Victory, (Garth.)—Very light pink; upper petals nearly covered with large maroon cloud, gradually softening to crimson, and showing pencillings of a deeper shade; under petals very light, tinged with pink at the margin; a good formed flower, and altogether one of the best grown.

Florence, (Garth.)—Somewhat similar to Prince Albert, but with the colouring rather paler.

Striata Formosissima, (Gains.)—White, with large puce spots, extending in lines of a lighter shade to near the edges of the petals; under petals marked with four or five lines, extending about half their length; good form and desirable, as contrasting well with other colours.

Ruby, (Foster.)—A very brilliant red, with deep velvety maroon spot; a remarkably attractive flower, but possessing the defect of a laxity of the lower petals.

Cuirassier.—A well formed large flower, of a delicate French white colour; upper petals marked with large very dark spots, extending outwards to a lively purple; a distinct variety.

Caroline, (Gains.) - A seedling of 1841, with large blossoms; colour, deep pink; upper petals irregularly clouded; a promising variety.

Defiance, (Gains.)—Also a seedling of 1841; a decided improvement on the Jewess, with larger flowers, and devoid of the scorched appearance of the blooms of that kind.

Fire Ball, (Gains.)—Vivid scarlet with small spot; a very showy kind; but not possessing sufficient substance.

Indian Chief. (Gains.)—Upper petals, dark maroon; under petals, pink; very interesting in colour, but the lower petals too long, not giving the bloom a sufficiently round appearance.

Masterpiece, (Gains.)—Bright pink with dark spot; a well formed and very desirable kind.

Warrior, (Gains.)—A very perfect form; colour, light crimson red, marked and spotted with deep crimson.

Sylph, (Foster.)—Bright pink, with clear dark spot; a very delicate and attractive kind, but not showing a disposition to bloom so freely as some others.

Lady Bridport, (Gains.)-Pure white, with clear puce spot : very delicate.

Raffelle (Gains.)—Blush, with very large dark spot extending outwards, and softening to a rosy pink; with marking to near the edge, of a deeper shade; good form, and free bloomer.

Arabella.—Bright red, with large blotch; under petals, rosy pink; very showy. The above were noted from Mr. Gains' collection.

(To be Continued.)

REFERENCE TO PLATE LXIII.

ÆSCHYNANTHUS RAMOSISSIMUS, branching Blush-wort.

NAT. ORD. CYRTANDRACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

The plant from which our drawing was taken, bloomed in the collection of Messrs. Henderson, of Pine Apple-place. It was introduced to this country in 1837, having been sent by Mr. Gibson from the Khoseea Hills, where he found it growing at an elevation of 4000 feet. A reference to the elevation of the tract it inhabits, would seem to give some ground to suppose that the extreme heat of many Orchidaceous houses, in which these plants are generally cultivated, must be rather unfavourable to the developement of its flowers; the species of this genus requires growing in very light material, such as sphagnum, moss, or leaf mould, and a strong heat whilst growing; and to flower them freely, a season of rest in a cooler temperature must be afforded them. Dr. Lindley says they are best cultivated when fastened to a piece of rough stick, placed in a pot, and filled round with a mixture of leaf mould, sandy peat, and a small portion of loam, and in a similar manner we have seen them growing freely at Messrs. Rollisons. The best means of inducing it to flower freely, according to Mr. Paxton's opinion, " is to refrain from stimulating it too much through the winter season, by diminishing very greatly the supply both of heat and moisture; doubtless a trifling degree of cautious exposure to the sun would also accelerate the production of blossoms. Potted



Eschynanthus.

no vieli Semphia in moss, or some very light material of a similar nature, with the stem attached to a block of wood, they speedily form roots. Soil, especially such as is calculated to retain moisture, should never be made use of; to the employment of this, and not its natural constitution, it is that it has obtained the character of not flowering freely." A somewhat different routine has been recommended by a writer in the Gardener's Gazette. He says" in March, take cuttings of the young shoots, and plant them in pots of decayed wood and peat, plunging them in a shady part of the tan bed; in a few weeks they will be rooted, during which time they require plenty of water. They may remain in these pots till the following March, when all the soil must be shaken from their roots, and the plants placed on logs of wood, and their roots enveloped in sphagnum, covering the whole block; the young shoots, if fastened to the moss, will root at every joint. Zinc wire is best to fasten the moss on the blocks, not being liable to rust; they delight in a very humid atmosphere and strong heat. About November, diminish the quantity of water. and keep them in a dormant state in a warm greenhouse till March; when it is wished to excite them, remove the old moss and replace it with new, pursuing the same mode of treatment.

There appears to be some confusion in the nomenclature of this genus, for in a recent number of the Botanical Register, Dr. Lindley remarks that we have several species established in our gardens, "not, however, under the names that properly belong to them, but with such as error or caprice have dictated. This, for instance, which in gardens rejoices in the name of "branching," is not the species so named by Dr. Wallich, which has larger calyxes and smaller corollas; neither is it that which Dr. Roxburgh calis the "parasitical," from the forests of the Garron Hills, as some will have it, that species having large pendulous crimson yellow flowers, approaching in shape and size those of Digitalis purpurea. The true Æ. parasiticus is probably the Æ. grandiflorus of gardens." The generic name is derived from aischuno, to blush, or be ashamed; and anthos, a flower, whence comes the ordinary appellation—Blush-wort.

NOTICES OF NEW PLANTS.

BROWNÆA GRANDICEPS, large-headed Bromman,

Bot. Reg.

NAT. ORD. LEGUMINOSEÆ. § CÆSALPINIEÆ. CLASS MONADELPHIADECANDRIA.

A magnificent stove shrub, introduced to this country in 1829, from the mountain forests of Caraccas, and woods near Cumana. "The plant itself is not uncommon, but to see it in flower is a rare occurrence. The specimen figured bloomed with R. Harrison, Esq., of Liverpool, in March last. The blossoms are produced in a short spike, tier above tier; every day witnessing the expansion of a new tier above those of former days, till at last the whole mass becomes a globe of living and glowing crimson. This brilliant head appeared on the side of the main stem, among the leaves, which at that time presented a singular phenomenon; every evening they rose up, and lifted themselves from the blossoms to expose them to the dew, so that each morning these beautiful objects were uncovered; but as day advanced, the leaves gradually drooped and bent down over the flowers, to guard them from the rays of the sun." This noble tree must be grown in a damp stove; a rich free soil is essential to its perfect development, and if planted out in a border or is a large tub, with room for the expansion of its foliage, it forms a magnificent object.

STROBILANTHES SCABRA, rough-leaved Conehead.

Bot. Reg.

NAT. ORD. ACANTHACE E. CLASS DIDYNAMIA ANGIOSPERMIA.

A stove plant, of half-shrubby habit, with dark green leaves, and terminal clusters of yellow flowers; requiring the general treatment of justicia, or eranthemum. It has bloomed in the collection of his Grace the Duke of Northumberland.

PIMELIA SPECTABILIS, showy Pimelia.

Bot. Reg.

NAT. ORD. THYMELACE E. CLASS DIANDRIA MONOGYNIA.

This is one of the most beautiful of this beautiful genus of New Holland shrubs The plant is readily distinguished by its robust habit and its long glaucous opposite leaves, which are arranged so as to form four rows along the stem. It blossoms something in the way of P. hispida, but with much larger heads of flower; there are several varieties in the garden of the Horticultural Society, differing in the intensity of colouring in the bracts. The same treatment which is given to the rest of the genus, will be found suitable to this also; but from its appearance of vigour and robustness, it is probable that it will be best adapted for planting out in the border of a Conservatory.

CATESETUM TRULLA trowel-shaped Feeler-wort.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. § VANDEÆ. CLASS GYNANDRIA MONANDRIA.

A singular but by no means handsome plant, having the general appearance of C. maculatum. As there exists much confusion amongst the names of the species of this genus, Dr. Lindley has appended the following catalogue of with which he is acquainted :-

§ 1 CATESETUM, lip-hooded, convex, 10 C. atratum, Lindl. placed at back of flower.

1 C. tridentatum, Hooker.

varieties C. macrocarpum, Rich .; 11 C. cristatum, Lindl. Claveringi, Lindl.; floribundum. Hook.

monster, Monacanthus viridus, Lindl.

2 C. maculatum, Kunth.

var. C. integerrimum, Hook. 3 C. Hookeri, Lindl.

4 C. semiapertum, Hook.

5 C. purum, Nees.

6 C. luridum, Lindl, (Anguloa lurida, Link.)

7. C. longifolium, Lindl.

8 C. discolor, (Monacanthus discolor,

var. Monacanthus Bushnani, Hook.

9 C. roseo-album, Lindl., (Monacan) thus roseo albus, Hook.,) probably a variety of the last.

- § 2 MYANTHUS, lip flat, placed in front of the flower.

vars. C. spinosum, Lindl, (Myanthus spinosus, Hook.;) C. poboscideum, Lindl.; C. barbatum, Lindl.

12 C. cornutuin, Lindl.

13 C. lanciferum, Lindl.

14 C. detoideum, Lindl; (Myanthus deltoideus, Lindl.)

15 C. trifidum, Hook. ; (Myanthus cernuus, Lindl.)

16 C. saccatum, Lindl.

17 C. laminatum, Lindl.

18 C. Russeleianum, Hook.

19 C. Trulla, Lindl.

20 C. poriferum, Lindl.

21 C. callosum, Lindl.

CŒLOGYNE FLACCIDA, Drooping Calogyne.

[Bot. Reg.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A native of Noakote, in Nepal, where Dr. Wallich found it growing on trees

Its long stalked narrow leaves, and stiff scales, that surround the base of the stems and pseudo bulbs, mottled with pitch brown, as if they were scorohed, readily point out this species, which is one of the least attractive of its genus. It requires the same treatment as C. Cumingii noticed in our last number.

MORMODES PARDINA, VAR. UNICOLOR, Leopard spotted Mormodes, whole colored variety.

[Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

The spotted flowered state of this fine and fragrant plant is figured by Mr. Bateman in his magnificent work; and he communicated to Professor Lindley the information, that shortly after M. pardina had flowered with him, he received from Mr. Barker specimens of a remarkable variety of it; the flowers of which were entirely self-coloured. This appears to be that particular state of the species which was received with the spotted variety at Woburn, from Mexico.

MAXILLARIA STAPELIOIDES, Stapelia-like Maxillaria.

Bot. Mag.

NAT. ORD. ORCHIDEÆ. CLASS GYNANDRIA MONANDRIA.

A rather diminutive but very pretty species, with the flowers spotted and checquered in the way of the blossoms of Stapelia. It is a native of Brazil, and was found by Mr. Gardner on the Organ Mountains; from whence it was sent to the Glasgow Botanic Garden, where it has subsequently flowered.

EUTERPE MONTANA, Mvuntain Euterpe.

Bot. Mag.

NAT. ORD. PALMEÆ. CLASS MONŒCIA HEXANDRIA.

"This plant was received at the Edinburgh Botanic Garden, from Granada, in 1815, through the kindness of Mr. Ross, and produced for the first time in 1837, a spathe which never attained its full size, nor did it open, though it remained above a year on the tree. In 1838, one somewhat more perfect was formed, and, bursting, allowed the escape of a spadix, which, however, never unrolled, but still remains on the tree, imperfectly unfolded. Now, there are three spadices on the tree, all perfect, and exposed by the falling of the leaves; but from the lowest only the spathe has yet dropped. The outline of others may also be seen within the sheathing bases of the leaves, which are still on the tree. Mr. Loddiges states that a tree has been in flower with him for two years, and the succession of spadices forming upon one plant, shows that the same thing will occur with us."

The portion of the plant which is eaten, either as a fresh vegetable, or as a pickle, is the terminal bud, and the soft interior of the after part of the stem. Many of the Palms may be used or misused for the same purpose.

ANIGOZANTHUS MANGLESII, Mr. Mangles' Anigozanthus. [Bot.

Bot. Mag.

NAT. ORD. HÆMODORACEÆ. CLASS HEXANDRIA MONOGYNIA.

An herbaceous perennial, with linear acuminate leaves, and scapes bearing green velvety flowers. It is a native of the Swan River colony, and was introduced by R. Mangles, Esq., in 1836. The red stem contrasting with the deep green of the perianth, renders it very interesting and beautiful.

DENDROBIUM MACROPHYLLUM, Broad-leaved Dendrobium.

Paxton's Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A superb species, imported from Manilla, about three years ago, by Messrs. Loddiges. It blooms during March and April, and small specimens have a disposition to bloom profusely. "The character of the species, its drooping stems and flowers, and the necessity there exists for witnessing the latter, either above, or on a level with the eye, at once shew the propriety of cultivating it on a wooden block, over the edges of which the stems may hang; a small wooden basket would, however, be equally suitable. Sphagnum, moss, or light fibrous heath soil, should be selected for planting it in, or to be placed around its roots; and it must be watered very abundantly and constantly, while its developments are progressing, and kept in a warm moist part of the orchideous house.

HELICHRYSUM NIVEUM, Snow-white Helichrysum.

Parton's Mag.

NAT. ORD. COMPOSITEÆ. CLASS SYNGENESIA SUPERFLUA.

An herbaceous, or sub-shrubby perennial; native of the Swan River Settlement, and first brought into notice at the Clapton Nursery. The best mode of treating it, is to raise it early every spring from seeds, and permit it to perish in the autumn; under this treatment the blossoms are altogether finer than when it is treated as a perennial plant. The name of H. robustum, on account of its vigorous habits, had been given it by Mr. Paxton; but a figure having since been published by Dr. Graham, with the appellation of H. niverum, on account of the supposed purity of its white flowers, the former designation is relinquished in order to avoid confusion.

MIRBELIA FLORIBUNDA, Many-flowered Mirbelia.

Paxton's Mag.

NAT. ORD. LEGUMINOSE E. CLASS DECANDRIA MONOGYNIA.

An Australian plant, of great beauty, with blossoms of purplish lilac, having a yellow centre. Its principal peculiarity is the astonishing prodigality with which its blossoms are produced, and from this cause, as well as from their beautiful colour, it stands very high among the charming products of the same climate. "Being what is termed a hair-rooted plant, or possessed of numbers of minute fibrous rootlets, it requires some care in its cultivation. Wholly without a disposition to rank or exuberant growth, the soil in which it is potted, should be composed of those ingredients which will not beget or foster such a tendency; for whatever would radically change its character in this way, would, no doubt, likewise prejudicially effect the inflorescence. The compost most suitable, consequently is a mixture of light sandy loam, and heath soil, of which the latter should be in proportion of six parts to four. If the soil be elevated slightly in the centre of the pot, so as to leave the neck (or that portion from which the stem and the roots jointly issue) freely exposed, the health of the specimen will be further secured. Free drainage, and the proper adjustment of the earth about the roots, are matters on which nothing need be said."

TROPÆOLUM MORITZIANUM, Moritz's Indian Cress.

Botanist.

NAT. ORD. TROPÆOLACEÆ. CLASS OCTANDRIA MONOGYNIA.

This species was introduced from Cumana, into the Botanic Garden, Glasgow, last year; and has subsequently flowered in the Botanic Garden, Edinburgh. It is rather a pretty species, and will probably be found adapted to adorn the flower garden in autumn, with several other of its congeners. The roots are tuberous.

ODONTOGLOSSUM ROSSII, Mr Ross's Odontoglossum.

Botanist.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONOGYNIA.

Imported from Mexico, by G. Barker, Esq., where it was found by his collector, Mr. Ross. It should be cultivated in a warm and damp stove, and may be potted in the same way as other species of this tribe; or if preferred, it may be put on

a piece of wood, and suspended from the top of the stove, as many other epiphytes Its propagation is similar to many others, merely dividing the pseudo bulbs.

MARCETIA DECUSSATA, Cross-leaved Marcetia,

| Botanist.

NAT. ORD. MELASTOMACE E. CLASS OCTANDRIA MONOGYNIA .

A small free flowering shrub, raised by Mr. Cunningham, of Comely Bank, from seeds sent home from Brazil, by Mr. Gardner. It has been kept in a stove; and one plant placed in the greenhouse, stands there in October without injury. It has required no particular management, and has flowered in September and October abundantly.

STACHYS COCCINEA, Scarlet-hedge Nettle.

[Paxton's Mag.

NAT. ORD. LABIATE ... CLASS DIDYNAMIA GYMNOSPERMIA.

An old but highly beautiful species, too tender to thrive continually in the open ground, but capable of imparting a degree of graceful beauty to the summer parterre, which renders it valuable for such purposes. Its treatment is of the simplest nature, requiring only to be propagated in the autumn, and kept during winter in a cold dry frame, protected from severe frosts by means of litter; and finally transplanted into the open border in the month of May, either in beds or patches along the borders, where they will bloom from July till October.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

PISONIA OLFERSIANA.

A singular Brazilian hothouse shrub, with opposite oblong lauceolate leaves, and small stiff panicles of dull pink flowers, partly male, and partly female. It has little beauty.

AOTUS LANIGERA.

A pretty greenhouse shrub, with narrow deep green sharp-pointed leaves, and thick racemes of yellow pea flowers. Mr. Cunningham found it at Moreton Bay, in swampy places. It has lately flowered in the nursery of Mr. Knight, of the King's road.

PODOLOBIUM BERBERIFOLIUM.

A pretty greenhouse bush, raised by Mr. Knight, King's road; and nearly related to P. trilobatum, of which it may be only a variety.

GERANIUM ERIANTHUM.

A handsome hardy perennial, with grey leaves, and rich purple flowers. One of our best herbaceous plants for the border of a shrubbery, raised in the Horticaltural Garden.

ERIGERON SQUARROSUM.

A hardy perennial, from N. W. America, much resembling the common Stenactis speciosa.

HIBBERTIA PERFOLIATA.

A handsome shrub, from the Swan River, with glaucous oblong leaves, and bright clear yellow flowers, almost as large as those of H. volubilis, and free from all unpleasant smell. It has flowered in the garden of the Horticultural Society.

SPIRÆA LANCEOLATA.

A hardy shrub, with white flowers; a native of China, having the habit of S. bella. In the gardens, it is known under the name of S. reevesiana.

STYLIDIUM BRUNONIANUM.

A pretty species, with two or three whorls of narrow glaucous leaves, and pyramids of bright pink flowers, placed tier upon tier. It is a greenhouse plant, probably annual, and a native of the Swan River colony.

GESNERIA DISCOLOR.

A fine species, with large thick heart-shaped leaves, and smooth terminal panicles of deep crimson flowers. It has been introduced from South America by Mr. Young, of Epsom, by whom it was exhibited at the Chiswick gardens.

MATHIOLA MADERENSIS.

In the way of the common Queen's Stocks. It is half shrubby, forming a bush two feet high. If it would become double, as it probably will, it would be a decided improvement on the present race of stocks. The smell of the flowers resembles that of Berberry blossoms.

ODONTOGLOSSUM EHRENBERGII.

This Mexican epiphyte is the same as O. Rossii.

DENDROBIUM ACEROSUM.

A small uninteresting species, from Sincapore, with dull'yellowish pink flowers, with pink stripes. It is nearly allied to D. teretifolium, but has smaller flowers, shorter leaves, and quite a different lip.

CYRTOCHILUM MACULATUM VAR. PARVIFLORUM.

A Mexican plant, corresponding in so many respects with the common C. maculatum, that Dr. Lindley thinks it no more than a variety.

EPIDENDRUM HASTATUM.

A very fragrant species, from Bolanos, imported by Messrs. Loddige. There are two varieties, one with purple, the other with green sepals; in both the lip is white, and the column dull deep purple. It produces a simple spike of flowers, about a foot long.

EPIDENDRUM ACICULARE.

A pretty little species, from the Bahamas, having long narrow leaves, a slender erect raceme of six or seven flowers, whose sepals and petals are dull purple, and the lip white, marked with rosy veinings,

HOULLETIA BROCKLEHURSTIANA.

"In the last number of the Annales des Sciences, M. Adolphe Brongniart has proposed a new genus of orchidaceous plants, founded on a specimen which he flowered in the Garden of Plants, and which he calls Houlletia. He considers it near Stanhopea, from which it differs in its sepals not being reflexed, its lip articulated in the middle, the lower half bearing two membranous horns directed backwards and upwards towards the column; by the column being short, and not membranous at the edge; by the petals having a stalk; by the lanceolate form of the gland of the pollen masses; and by the flowering stem being erect, and not pendulous. Upon considering this character, it is evident that Houlletia is either the same as Maxillaria Brocklehurstiana, or a plant very much related to

it As the genus is no doubt a good one, it will be necessary to change the name of my species to Houlletia Brocklehurstiana."

HOULLETIA VITTATA.

A curious plant, received by Messrs. Loddige from Mr. Schomburgk, having the erect raceme of H. Brocklehurstiana, but the flowers are smaller, of a yellow colour, so liberally streaked with deep chocolate, that the former is hardly seen, except on the lip.

GONGORA MACULATA VAR. ALBA.

A singular variety, received by the Horticultural Society from Oaxaca. It is very graceful, and forms a good contrast with the old yellow and purple kinds.

CYRTOCHILUM FILIPES.

A Cyrtochilum, having the yellow flowers of an Oncidium, produced on the point of a very slender stem, above two feet long. Imported from Guatamela, by Mr. Bateman.

LALAGE HOVEÆFOLIA.

A pea-flowered plant, nearly allied to Pultenæa, with blossoms of a dull yellowish orange, stained with purple at the back. A greenhouse shrub of easy cultivation.

PULTENÆA BRACHYTROPIS.

A pretty little greenhouse shrub from Port Augusta, on the west coast of New Holland, with something the habit of Chorozema Dicksoni; the flowers are pale orange, growing in heads.

NOTYLIA AROMATICA.

A small inconspicuous species, with pale green, very sweet scented flowers. A native of Para; very nearly related to N. Barkeri.

STYLIDIUM PROLIFERUM.

This, and the following are natives of the Swan River Colony. A very pretty herbaceous plant, with red, branching stems, and small pink flowers. Apparently only an annual.

STYLIDIUM PILOSUM.

This fine species has the appearance of a broad leaved Armeria, until it flowers, when it throws up a simple panicle of very pale pink flowers, exceedingly pretty, while in perfection, but it soon goes off.

OXYLOBIUM CAPITATUM.

A small greenhouse shrib, with narrow leaves, and heads of yellow, and brown flowers; from the Swan River, raised by Robert Mangles, Esq. Not of much horticultural importance.

ZICHYA VILLOSA.

A new species of that division of the old genus Kenneyda, to which the name of Zichya is now applied, and "certainly prettier than any of them." The flowers are small, but of a brilliant vermillion, tinged with violet. From the Swan River.

GONATANTHUS SARMENTOSUS.

An Araceous plant from India (!), raised in the Royal Botanic Garden, Berlin

It has leaves something like those of the common Wake Robin, and long dult yellow spathes, abruptly bent near the base, and extending into a long narrow convolute point.

MEGACLINIUM BUFO.

"Let the reader imagine, a green snake to be pressed flat, like a dried flower, and then to have a row of toads, or some such speckled reptiles, drawn up along the middle in single file, their backs set up, their fore legs sprawling right and left, and their mouths wide open, with a large purple tongue wagging about convulsively; and a pretty considerable approach will be gained to an idea of this strange plant; which, if Pythagoras had but known of it, would have rendered all arguments about the transmigration of souls superfluous." A native of Sierra Leone.

REVIEW.

The First Book of Botany, being a plain and brief introduction to that science for schools and young persons, by MRS. LOUDON, Author of Instructions in Gardening, The Lady's Flower Gardener, &c. &c., illustrated with thirty Wood Engravings. LONDON, G. Bell, 186, Fleet-street.

Mrs. Loudon's preface to the little volume before us given below, conveys an accurate idea of the objects and design of the book.

"The following pages are intended to explain those terms to the young student which are common to all systems of Botany, and without a knowledge of which it is impossible to understand the descriptions of plants given in any Botanical work. In most works on Botany, these terms are mixed up with many others, which, not being necessary at first, only serve to perplex the young student; and it is, therefore, trusted that the selection of the most essential given in the following pages, will be useful in forming the first step from which the student may afterwards advance at pleasure:

." When these terms, which may be called the Alphabet of the science have been acquired, it will be comparatively easy for the pupil to study either the Linnean or the Natural system of Botany."

The book is divided into three chapters; the first treats on the parts into which plants are divided by Botanists, viz., the root, the trunk or stem, the leaves, the flower, and the fruit or seed.

The second chapter on the natural division of plants, describes the characters of the various sections into which plants are divided, namely, ligneous plants, trees and shrubs, herbaceous plants, evergreens, deciduous plants, succulent plants, parasites or epiphytes, hardy, half-hardy, and tender plants. The next chapter treats of the divisions to which they have been referred by science, these are, the systems of Linnæus, the system of Jussieu, and the natural system of the same author, as modified by Professor de Candolle. Under the same head, the use of classification is briefly, but clearly given; and this is followed by remarks on classes, orders, genera, species, and

varieties. A glossary, explanatory of the botanical terms in general use, with reference to the body of the work, where they are more fully detailed.

That Botany is esteemed a fashionable and polite acquirement is now universally acknowledged, a fact sufficiently attested by the enquiry so often made, namely—Which is the best book on Botany? To all young persons and others who are not already initiated into the science, we have much pleasure in recommending Mrs. Loudon's little work.

MISCELLANIES.

HULL BOTANIC GARDEN—In a letter recently received from the Curator, he informs us, that during the past winter, more trees and shrubs have been killed, injured, &c., than has been the case there for many years; and says the Chinese and Bourbon roses are all killed to the ground, and the budded ones entirely. "I have lost a fine R. microphylla, and yellow Banksia, which stood for many years nailed to the front wall of a greenhouse."

The principal source of potash is the vegetable kingdom, and the simplest method of procuring it is by burning wood. When this is done, after all the carbon, hydrogen, and oxygen, is burnt, there remains a quantity of white or grey matter called ashes, which, when put into water, renders it caustic. This is occasioned by the presence or potash, which not being altered by the heat occasioned by the burning of the wood, is left in the ashes In this way, however, we do not obtain the potash pure, because, being a powerful base, and having a strong affinity for acid, it combines with some of the carbonic acid formed by the burning of the carbon contained in the wood, and, therefore, the caustic substance found in the ashes of the wood, is an impure carbonate of potash. It is purified by pouring water on the ashes, straining off the clear liquor and evaporating it; a white salt is left, which is the carbonate of potash, separated from all the other matters which were contained in the ashes, and when thus purified, it is called pearl ash. When potash is obtained pure and free from any acid, it is found to be a very caustic substance, which has a strong affinity for acids, and is very difficult to keep, as it rapidly acquires carbonic acid, and becomes converted into the carbonate. Potash has also a strong attraction for water, so that when dry, pure potash is exposed to the air, it very soon becomes moist, and in a short time has attracted so much water from the air as to appear changed into a liquid. This power of attracting water from the air is common to most of the salts of potash, as well as other saline compounds. Salts of potash are met with in many plants in small quantities, they are likewise commonly found in the soil, and potash is by no means uncommon in stones; indeed, it is evident that the salts of potash found in the soil, must have been derived from the gradual breaking down and decomposition of stones and rocks containing the compounds of potash .- Gardener's Chronicle.

Messrs. Rollisson, of Tooting, possess two distinct and very beautiful varieties of greenhouse Azaleas, one of a pure white, with delicate and distinct markings of light red, named Gledstanesii; the other of a very beautiful ruddy salmon. The

form of these two varieties approach much nearer to perfection than any others we have seen, being almost a complete circle, which is owing to the width and firmness of the petals. Being a delightful genus of plants, and one of easy culture, we feel gratified in being able to recommend the varieties in question, as peculiarly deserving the attention of those with whom this genus is a favourite; and we do this the more readily, as the possession of the kinds in question does not incur any amount of expense.

Where perfect drainage cannot be secured, it is scarcely worth attempting to naturalize an exotic tree; for, in the first place, it cannot ripen its wood, and, secondly, the water that surrounds its roots in winter, is absorbed by them incessantly, and gorges the branches so as to render them susceptible of an amount of cold, which would be unfelt in a drier state. On the other land, we find that whenever great success has attended the preservation of tender plants in the open air during many years, it is invariably connected with a soil completely deprived of its superfluous moisture, either by nature or art.—Gardener's Chronicle.

The medals of the London Horticultural Society, were awarded to the Exhibitors as follows. Those marked n. are nurserymen or dealers.

Gold Knightian.—Mr. Green, gardener to Sir E. Antrobus, for a collection of 50 stove and greenhouse plants; Mr. Butcher, gardener to Mrs. Lawrence, for ditto; Mr. W. Barnes, gardener to G. Norman, Esq., for Cape Heaths; Mr. Mylam, gardener to S. Rucker, Esq., for 6 orchideous plants; n Messrs. Rollison, for ditto.

Gold Banksian.—Mr. Cock, of Chiswick, for a large collection of pelargoniums; n Mr. Catleugh, of Chelsea, for ditto; Mr. R. May, for 6 Cape Heaths; Mr. Milne, gardener to C. S. Chanelly, Esq., for Roses in collection; n Messrs. Wood and Son, for ditto; n Messrs. Rivers and Son, for ditto; Mr. Mylam, for 3 orchideous plants; Mr. Hunt, gardener to Miss Trail, for a collection of 50 stove and greenhouse plants; Mr. Barnes, for 20 stove and greenhouse plants; Mr. Davis, gardener to Sir Simon Clarke, for a miscellaneous collection of fruit.

Large Silver .- Mr. Cock, for a small collection of pelargoniums; n Mr. Catlengh, for ditto; n Mr. Gains, for large collection of ditto; Mr. Bruce, gardener to B. Miller, Esq., for 6 Cape Heaths; Mr. Butcher, for 20 ditto; Mr. Leslie, gardener to Mrs. Fleming, for Roses; n Messrs. Paull and Son, for ditto; n Messrs. Cobbett and Son, for ditto; Mr. Green, for herbaceous calceolarias; n Mr. Catleugh, for ditto; n Mr. Gains, for ditto; Mr. Green, for shrubby calcolarias; n Mr. Gains, for ditto; Mr. Green, for seedling calceolarias; Mr. Insleay, gardener to G. Barker, Esq., for 6 orchideous plants; Mr. Butcher, for 3 ditto; Mr. Insleav, for 3 ditto; Mr. Craggs, for Schomburgkia tibicinis; Mr. Mylam. for Ærides odorata; Mr. Falconer, gardener to A. Palmer, Esq., for Polygala oppositifolia; Mr. Wray, for Brachycome iberidifolia; n Mr. Jackson, of Kings. ton, for collection of 20 stove and greenhouse plants; n Messrs. Young, of Epsom, for ditto; Mr. Falconer, for a collection of 6 ditto; Mr. Brnin, gardener to Mr. R. Gunter, for miscellaneous collection of fruit; Mr. Davis, gardener to Lord Boston, for ditto; Mr Willmott, for Willmott's black grape; Mr Judd. gardener to G. Knott, Esq., for pine apples.

Silver Knightian.—Mr. C. Knight, of Kentish Town, for pinks; n Mr. Norman, of Woolwich, for ditto; Mr. Butcher, for a large collection of pelargoniums; Mr. Hunt, for small collection of ditto; n Mr. Gains, for ditto; Mr. Alexander Rowland, for roses; n Messrs. Lane and Son, for ditto; Mr. Watson, gardener

to J. Wells, Esq., for herbaceous calceolarias; Mr. Watson, for shrubby ditto; n Mr. Catleugh, for ditto; n Mr. Jackson, for 25 Cape Heaths; Mr. Barnes, for 6 ditto; Mr. Upright, gardener to G. Ridge, Esq., for tall Cacti; Mr. Forster, for seedling pelargoniums; Mr. Mitchell, for balsams; Mr. Barnes, for 6 orchideous plants; n Mr. Masters, for 3 ditto; J. Jarrett, Esq., for Ærides odorata; Mr. Dickson, of Acre-lane, for Erica depressa; Mr. Vietch, of Exeter, for Lechenaultia biloba; Mr. Bruce, for collection of 6 stove and greenhouse plants; Mr. Mylam, for Nepenthes distillatoria; Mr. Chapman, of Vauxhall, for grapes; Mr. Dowson, gardener to W. Leaf, Esq., for ditto; Mr. Floud, gardener to Sir J. Guest, for pine apples; Mr. Foggo, gardener to the Marquis of Abercorn, for peaches; Mr. Chapman, for a seedling grape "Prince Albert;" Mr. Leslie, for a green flashed melon.

Silver Banksian.—Mr. Bridge, of Carshalton, for pinks; n Mr. Willmer, of Sunbury, for ditto; Mr. Falconer, for tall Cacti; Mr. Kier, gardener to W. Coulthirst, Esq., for roses; n Mr. S Hooker, of Brenchley, for ditto; n Mr. Willmer, for ditto; Mr. W. Barnes, for shrubby calceolarias; Mr. Watson, for ranunculuses; Mr. Bridges, for beartsease; n Mr. Norman, for a seedling pink; n Mr. Catleugh, for seedling pelargoniums; Mr. Bruce, for Ærides odorata; Mr. Bruce, for Ixora coccinen Mr. Bruce, for Elichysum humilis; Mr. Bruce, for Cactus Mallisonii; n Mr. Mountjoy, for Gloxinia violacea; Mr. Barnes, for 6 stove and greenhouse plants; Mr. Green, for a seedling cactus; n Mr. Rivers for seedling peconias; Mr. Dowson, for a Otaheite pine apple; Mr. Tillery, gar dener to the Duke of Portland, for peaches; Mr. Foggo, for figs; Mr. Myatt, for "Eliza" strawberry; Mr. Snow, for Snow's "Horticultural Prize" cucumber; R. Brook, Esq., for apples and pears; Mr. Bruce, for green fleshed melon.

At an evening meeting of the Royal Botanic Society of London, held on the 9th ultimo, it was incidentally alluded to by John Disney, Esq. the Chairman, that during the spring of last year, 1840, he had purchased some recently imported orange trees, and, he described them as "mop sticks grafted," having no leaves and scarcely any branches; he, however, sent them down to his gardener in the country, who had turned them into living plants, and they are now full of both foliage and blossom; but what we wish particularly to notice with respect to this is, that he also mentioned that a friend of his, who had purchased some of the same kind of trees, took them home and laid them by in his cellar and forgot them. They were, however, discovered a week or two ago, and were instantly put into earth and submitted to a warm temperature, and are now growing vigorously. They had thus been laid in the cellar twelve months without any earth to their roots, and when taken out and brought under the influence of heat and moisture, they grew with unusual vigour.

Mr. Barrie, gardener to Mrs. Dolphin, Eyford, sent us specimens of Bignonia Australis, grown in the conservatory at that place, upon the pillars and along the roof, to the length of ninety-five feet. The panicles of bloom sent us were upwards of twelve inches in length, and containing several hundred flowers each. Mr. Barrie states that the lateral shoots were not at all shortened during the preceding year, and nearly every lateral shoot has this season produced bloom.

The gardener whose advertisement appears on the Cover of this Month's Magazine, is now employed in the Botanic Garden, Inner Circle, Regent's Park, and we shall be happy to answer any inquiries respecting him.

MONTHLY CALENDAR.

FLOWER GARDEN.—This department will require constant attention in tying up, removing coarse or irregular growth, and keeping every thing in an orderly condition; watering must be attended to with all diligence in dry weather, observing to water liberally rather than frequently; a few more annuals of the early flowering kinds may be sown for a succession, and the place of those which have done blooming must be replenished without delay; take up bulbs when they have done blooming, as directed last month; propagate pinks, dianthus, wall-flowers, and similar plants; layer carnations, transplant biennials and perennials intended for flowering next year; eradicate weeds as soon as they appear, and keep the surface frequently stirred; remove all decaying leaves and old flower-stems, and attend to neatness; frequently roll and mow grass lawns; weed and roll gravel walks after rain, and let them be regularly swept.

PLANT STOVE.—The plants in this department must be well supplied with water, syringing morning and evening, and frequently wetting the pathways to keep a moist atmosphere; repot all free growing plants that require it; tye up climbing plants; propagate where desirable; admit air freely early in the day, and close early in the afternoon; attend to orchidaceous plants, that they have plenty of moisture whilst growing.

GREENHOUSE.—Balsams and other tender annuals may be repotted and brought into the greenhouse on showing flower, the dwarfer kinds may be retained in the frames; succulents for the most part may be removed to an open situation, where they will be sheltered from heavy rains; attend to greenhouse plants placed ont of doors that they do not want for water, these should be in a partially shaded situation; all plant structures should be repaired and fresh painted during fine weather, so that drip may be avoided in winter.

KITCHEN AND FRUIT GARDEN.—Continue to attend to the wall trees as they advance, and let all shoots be properly secured; let budding be vigorously prosecuted, if the weather is favourable. Sow peas and beans in small quantity for a late crop, kidney beans, spinach, and turnips for succession; and towards the end of the month sow spinach for winter; sow broccoli for late spring crop, lettuces, turnips, radishes, and salading for succession; endive in the second week for antumn and winter; coleworts for antumn and full winter crop; transplant broccoli, savoy, Brussels sprout, Scotch kale, and cabbage; endive, celery, lettuce, and leeks, for winter use; take up shallots and garlic, and let them be dried; pull onions, if full grown; stick peas; earth up advancing crops; hoe frequently, and water as time and other circumstances permit; attend to cucumbers on ridges, and let them be well supplied with water.

Forcing Garden.—Let the pines have prompt attention in shifting those which have made sufficient roots, either in small plants or those intended for fruiting in spring; take off suckers when the fruit is cut, and plant them, plunging the pots in a brisk dung heat; attend to ripening fruit, that it is not injured by water, and afford timely support to those which are advancing, give plenty of air and keep the houses damp; do not water ripening melons, but let them have plenty of air; attend to the advancing crops. Admit air freely in peach houses and vineries, and when the fruit is ripening, be careful not to use too much water: later houses may be kept moister; take the lights off when the fruit is gathered, so as to prevent the unnecessary increase of insects; let all available means be used in every department to keep down these pests.

PARK AND PLANTATIONS.—Keep fences in repair at all times; attend to hedges, especially young ones, and clear them of weeds.

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXIII.-AUGUST, 1841.

REMARKS ON PELARGONIUMS, WITH A DESCRIP-TIVE LIST.

(Continued from Page 36.)

BY T. M.

In the last number of this work were some remarks on the Pelargonium, with a description of a limited number of the best and newest kinds, taken from the collection of Mr. Gains. The following is a continuation of the list there commenced; and being noted from Mr. Catleugh's collection, they may be regarded as forming an index to the leading varieties now in cultivation. There may be many kinds equally desirable with those here given, and which may have been omitted in consequence of not being in bloom at the time the list was compiled; but those which are included, may be regarded as possessing a sufficient share of good properties, to render them worthy of notice and cultivation.

The great improvement which has been effected in the character of these plants, within a short space of time, is chiefly owing to the enterprise and spirit of a few individuals who have given their especial attention to this particular department. And when we take into consideration what has been done with all other flowers which have been domesticated, it is not at all unreasonable to suppose that still greater improvements will yet take place, more especially since the popular impulse has been given, and the raising of hybrid Pelargoniums is become an object of emulation, not only amongst amateurs, with whom it chiefly originated, but also, as far as circumstances permit, amongst professional gardeners.

In successfully prosecuting the hybridization of any class of plants, whether it be geraniums, or any other favourite flower, it has been found necessary to have recourse to art, as a probable means of ensuring some degree of success. It is true that plants may be raised from seed, collected at random, which shall possess properties

VOL. VI.

G

equal to any which may have received more attention; but the greater probability is, that such productions will be of but rare occurrence, since the fertilizing pollen exercises a greater power over its own relatives, than that of a strange or distinct kind would do; thus rendering it necessary to take the precaution of destroying the anthers of these blooms intended for impregnation when in an infant state, and to guard against any undesirable alliance, by carefully enveloping such blooms in a covering of gauze, or similar material. It is requisite, also, to choose varieties with colours having a sufficient affinity with each other, to form an agreeable combination, and yet sufficiently distinct to avoid a sameness, or mere repetition of those already possessed:—

Nymph.—A fine and well-shaped bloom, of a delicate rose-pink colour, the upper petals blotched with dark maroon, and the centre of the flowers of a pure white.

President.—Bright rose, with a clear and distinct blotch of dark maroon, having the centre of the flower paler than at the extremity of the petals; of good shape.

Elizabeth. - Light rose, with very large dark splash, surrounded by a zone of bright crimson; a very desirable kind.

Jubilee.—A very finely formed and distinct variety; the upper petals nearly covered with a dark maroon cloud, distinctly veined and margined with rose, the lower petals a clear delicate pink.

Nero .- Large purplish rose, with a dark veined cloud.

Flamingo.—Very large deep crimson, with dark blotch on upper petals, diffused toward the margin, the lower petals veined; a large and well-formed flower.

Albion.—Pinkish rose, with large maroon cloud, irregularly feathered towards the margin, a most beautiful shaped bloom.

Rosalia.—Bright rose, with clear dark spot, and having a pale centre; a fine-shaped and handsome kind.

Queen of Fairies.—A very distinct and beautiful variety, having the upper petals clouded with very deep crimson maroon, and a narrow margin of pure white, the lower petals white; of fine form, one of the most desirable new kinds

Wonder.—Very light red, with large deep shaded blotch on the upper petals; a fine, large, and very showy kind, of good form, and free bloomer.

Flash.—Fine and well-formed, the upper petals clouded with light maroon, and veined to near the margin, which is of a rosy pink, the lower petals also of a rose-pink, are delicately veined.

Cressida.—An exceedingly showy kind; the upper petals of a light rose colour, with dark maroon blotch, the lower petals of a purplish rose.

Medora - Deep crimson, with dark spot, large and well-formed.

Grenadier.—White, upper petals covered with large puce blotch and pencilling, lower petals white, with delicate veining; of large size and good form.

Conservative.—Rosy crimson, with large dark blotch, the lower petals purplish crimson; good form.

Pictum - French white, with dark spot, and very prominent pencillings.

Britannia.—Very delicate pink, with dark blotch on the upper petals, surrounded by a ray of rosy pencillings, the lower petals delicate pink; a large flower and well formed. Little John.—Light pink, with very dark blotch on upper petals, the lower ones delicate blush; a well shaped bloom:

Evadne.—Ruddy pink, with dark spot, bordered with crimson on the upper petals; a fine formed flower.

Bridesmaid.—The upper petals covered with a veiny clouding of light maroon, surrounded by a narrow margin of light pink, the lower petals delicate blush; a very superior kind.

Carona.-Light salmon red, with very dark blotch; a large flower and very showy.

Duke of Wellington.—Large and well formed, the upper petals crimson, clouded and blotched with very dark maroou, lower petals deep rose-

Mabel. - Light pink, with dark blotch on upper petals, centre of the flower a paler colour.

Annette.—French white, with dark blotch, blooms of moderate size and well formed.

Lineatum.—French white, upper petals distinctly veined with puce; good form.

(To be Continued.)

ON THE CULTIVATION OF RUELLIA ELEGANS.

BY T. MOORE.

One of the prettiest little plants, when properly cultivated, which foreign countries have shared with us, is the Ruellia elegans, a native of the East Indies, and introduced to this country in 1834; its pretty blue flowers produced in such profusion, and its neat habit, render it worthy of the small amount of attention required in its successful cultivation. Its propagation is of the simplest kind, requiring only to be planted in sand in the ordinary manner, and placed in a gentle hot-bed, where it will readily take root; it should then be potted off singly into small pots, and kept for a short time in a close frame until it commences growing. It will then require the attention of repotting, which must be repeated at intervals, as the plants may require; water must be used with caution, in order that the soil may not become soddened, which would have the effect of greatly injuring the plant: its growth is rapid if submitted to a proper stimulus, and the profusion of flowers which it produces, render it very desirable as a summer ornament to the greenhouse.

The plant with which it would best associate is the pretty Trevirania coccinea, the profuse scarlet bloom of which would admirably contrast with the delicate blue of our present subject; and as a great similarity exists between the habits of the two plants, it is difficult to imagine any thing producing a more beautiful effect, than a combination of the plants in question.

In order to secure this fully, I should recommend the Ruellia to be propagated in autumn, or very early in the spring; if the former course were adopted, nothing would be necessary during the winter beyond keeping the plants in a healthy state both at the roots and also in the herb; and this could readily be effected by placing them on a shelf near the light in a cool part of a stove, and paying strict attention in watering them, that they neither receive too much nor too little. If it were preferred to propagate early in the spring, nothing would be requisite but to take healthy cuttings, and strike them as quickly as possible in a gentle hot-bed, and pot them in a light free soil, keeping them in a close and moderately warm atmosphere, and paying attention to repotting as often as the plants require it. During their growth throughout the spring, they are best kept in a position where they may enjoy a full share of light, and a temperature of from sixty-five to seventy degrees; as the season advances a warm greenhouse is all the protection they require; indeed, they remain a much longer period in bloom, if allowed to complete their growth in a gradual manner, than if submitted to a higher temperature up to the time of their blooming.

The soil in which they grow freely is a mixture of turfy loam and peat, broken with the hand, to which a sufficient portion of sand might be added to render the compost open to the ready egress of moisture; an abundant share of drainage should also be given them, for if the surplus water be not speedily carried off from their roots, they will in a short time become unhealthy. Whilst young, the shoots should frequently be stopped, in order that they may form dwarf bushy plants; and a spreading position should be given them, by training each principal stem to a separate stake, as nearly horizontally over the edges of the pot as circumstances and its position will admit. If this is attended to in good time, the lateral shoots will fill out the spaces between them, and the whole will become a mass of blossom: they must be kept growing vigorously, however, during the early part of the season, in order to prevent them from settling down into a state of inflorescence before they have attained a desirable size.

The period at which they will be in bloom, if such a course is adopted, will be about the end of July or beginning of August, varying as their maturity may have been encouraged or retarded; it is quite likely that they might be grown larger, and brought into bloom much later, if shifting into larger pots, and stopping the young shoots, were assiduously continued.

From the very profuse habit of flowering which this plant possesses, and from the general nature of similar ones, to die after having thus expended their energies in the abundance of their floral developments, it becomes difficult at all times to secure a supply of cuttings from such plants; or if cuttings can be obtained, their vital energies are very frequently so far weakened, that some time will clapse before a vigorous growth can be secured; in order to avoid

this fertile source of disappointment, it is advisable to prevent one or two plants from flowering altogether, so that a full supply of healthy and vigorous cuttings may be readily obtained. If something similar to the mode of treatment here recommended be followed, the cultivator will find himself rewarded with one of the prettiest subjects for ornamenting the greenhouse during the latter part of the summer, which have ever been submitted to his notice.

REMARKS ON STATICE ARBOREA.

RY STATIZO.

It is often urged as an objection against this, one of the most interesting species of the genus, that it becomes naked in the stem, only retaining a small tuft of leaves at an elevation of from one to two feet above the pot in which it is planted. It is almost surprising how persons raising such objections should overlook the character of the plant altogether; more especially when the specific appellation applied to it must have the effect of constantly bringing to their mind the idea of something tree-like. Whilst, however, it does not appear to be at all politic to find fault with the plant in question, in consequence of it assuming such an habitude; it must be admitted that the acquirement of a due proportion of healthy leaves should be made an object in carrying out its cultivation : because on the healthy foliation of a plant depends, in great measure, the healthy condition of the inflorescence; and in order to secure this in the most satisfactory manner, a precedent should be sought in its native habitat.

The plants comprehended in the natural order to which Statice arborea belongs, are, many of them, inhabitants of salt marshes and positions in the immediate vicinity of the ocean, in the temperate parts of the world. Many of them have their habitude on rocks barely covered with soil, but in most cases under the direct influence of the sea water and breezes; whilst others inhabit situations from the European mountains to the sterile volcanic regions of Cape Horn. The plant under consideration appears to belong to that section, which, whilst growing on rocky acclivities, are immediately influenced by the marine situation they occupy; and, therefore, in cultivating it with the greatest chance of success, it appears that the following conditions demand especial attention. That the roots be allowed abundant means of spreading in an horizontal direction; that the soil in which they grow should be continually moist, and at the same time so contrived as never to be saturated; and that the use of an imitation of sea water be made a feature in its treatment, not only

as regards its application at the roots, but also in the form of vapour. The means of carrying out these conditions would seem to be, first, to allow a very abundant share of pot room, so that the roots may never become cramped; and if planting out in a conservatory can be effected, which would appear to be desirable, a few uneven blocks of stone should be placed together in the form of a craggy mountain, in miniature, and the plant set in a hollow position at the top of these, the roots being allowed to ramble on those parts of the stone which would admit of a slight covering of soil; secondly, when grown in pots, to make use of similar blocks of freestone, which, while they would have the effect of retaining moisture about the roots, would also readily allow the escape of such as might be superfluous; the application of water should also be frequent and abundant whilst they are in a vigorous growing state; and thirdly, the water made use of should contain a solution of rock salt, or nitre, the exact proportions of which is a fit subject for experiment,

ON THE CULTIVATION OF THE DOUBLE WHITE ROCKET, (Hesperis Matronalis Pleno-Albus.)

BY GULIELMUS HESPERIS.

Being an admirer of the beauties of Flora, I have long regretted the absence in many collections of a very old acquaintance, which, for the delicate texture of its petals and the delightful fragrance it diffuses around, is equalled by few of the beauties of the present day, I mean the Double White Rocket. I have made many enquiries for the plant, and in most cases have been told it has become exceedingly scarce, through the difficulty of propagating and keeping it in a healthy state, as many suppose it is, to use a trite expression, "worn out." Now this is a doctrine I cannot accede to. That there is a mode of culture better adapted to the habit of the plant than any other, I am ready to admit: at the same time I consider the process very simple, and which the merest tyro in floriculture could adopt with the most complete success. I have cultivated and grown the plant in question for many years, in a manner that has always proved highly satisfactory as regarded the health of my plants, and the beauty of their inflorescence.

I will now give you my mode of propagation, which is simply this: when the plants have made shoots ten or twelve inches in length, I take as many as I think I shall want, and divide them into cuttings of three eyes in length, always divesting the top of the shoot of the uppermost eye. Then having prepared a bed for their reception, by mixing three parts of good mellow loam with one of sharp

sand, (laying the same six inches deep.) I immediately plant my cuttings, inserting two joints in the mould, close them well, and place a glass over them, having just given a good but gentle watering, to settle the mould, shade them from the mid-day sun, and give water when requisite; by this simple method I have never failed to ensure a good strike of fine healthy plants.

I have frequently propagated by division of the roots in September, but I decidedly prefer doing so by cuttings in the spring, as the plants have more time to establish themselves before the autumnal

frosts set in.

Where it is wished to grow this plant in a high state of perfection, care should be taken that no manure whatever form a part of the soil in which they are planted, as it will cause a strong exuberant growth, and materially diminish the chances of propagation, either by cuttings or division.

I always plant in good fresh loam, and my plants grow stocky, throwing up many stems, and flowering in thick dense spikes from ten to fourteen inches long. I never let my plants flower but twice, as I consider they have reached their highest perfection the second year. I, therefore, propagate every year, which keeps my stock of plants full.

REMARKS ON THE CULTIVATION OF ERANTHEMUM PULCHELLUM.

BY THE EDITOR.

This an old plant, many years in cultivation, and one which almost every gardener knows. It is generally treated as a stove plant, and but seldom regarded as worth house-room, and, therefore, but very rarely seen in perfection. We have the greater pleasure in using our efforts to bring into notice the present subject, because it is, when properly treated, a most beautiful plant; and because, in the present race after novelty, this is one of many others which have been long in our gardens, but displaced by such as possess novelty, but very little ornament. One mode of treating this plant, as described below, was given us by a gardener, who has the management of one of the largest garden establishments in the country, and where forced flowers are in great request during the winter and spring months.

The first process is that of raising the plants from cuttings; and this is done during March and April. They are, as soon as potted off placed in sixty-pots. They are then put into a gentle hot-bed, and kept close. When they begin to grow, the tops of the shoots are nipped off. They immediately throw out two lateral shoots. They are then shifted into forty-eight sized pots; and when the lateral

shoots have made some progress, their points are also taken off, and these again throw out two more shoots each. By this means, four lateral shoots are obtained, thus forming a handsome bushy plant, of about a foot in height. The process just described will generally be completed about the end of June. The plants are then removed to a cold frame, and are merely protected from the heavy rains, and are slightly supplied with water. In this way, the shoots become hardened and well matured. The leaves acquire a yellow hue, and droop a little; and the whole plant becomes dormant early in the autumn, but requires no other care than protection from the frost. They are then removed in quantities according as they are required, into a stove or forcing house, having been previously shifted into thirty-two sized pots. They are then liberally supplied with water, and frequently syringed over head, by which the foliage acquires a vigorous and healthy appearance, and each of the four shoots produces its beautiful cluster of blue flowers.

We should not have been thus minute in our description of this plant, had it not been given to us by undoubted authority, and were not our own knowledge of it such as to fully confirm all that has been stated. We do not know any plant the cultivation of which is more simple, the blooming of which is more certain, and but few that are really more beautiful.

NOTICE OF THE THIRD EXHIBITION OF THE HOR-TICULTURAL SOCIETY OF LONDON.

The third exhibition of the London Horticultural Society, which took place on Saturday, the 10th of July, at the Gardens at Chiswick, although somewhat inferior to the two former ones in the number and splendour of the plants exhibited, was much superior to them in the display of fruits. We think that the gardeners, in this particular, have very promptly responded to the call made in the advertisement of the Society, offering increased remuneration to those who might choose to exhibit in this department. The attendance of company was not nearly so numerous as on former occasions; although the weather was by no means unfavourable. This circumstance is probably owing to the present situation of the country, by which cause many of the principal families are absent from the Metropolis.

As at the former exhibition, so at the one under notice, the display of Roses seemed to elicit a considerable share of approbation; indeed, it would have been extremely difficult to pass over these "gems of creation," without bestowing on them the praise they so richly deserved. The collections exhibited by Messrs. Lane and Son, and Mr. Milne, were particularly fine, and well merited the

distinguished mark which was given them; it is peculiarly gratifying to see so many Amateurs and Gardeners exhibiting in this class; there being scarcely any feature in a floricultural establishment more attractive, and possessing charms more fascinating, than a collection of these lovely flowers; and perhaps there is no stronger proof that they are held in due estimation, than the simple fact just now mentioned. Rosa Devoniana was exhibited by Messrs. Lucombe and Pince, and appears to be a desirable kind.

Next to the Rose, as a popular flower, the Geranium has, perhaps, a claim to rank but little its inferior; the plants in this department were much less attractive than on former occasions, their natural season of blooming (that is, in perfection) being over. There was, nevertheless, some well bloomed plants in the various collections, especially those of Messrs. Gains, Catleugh, and Cook; others again were certainly not worth the trouble required in staging them. The seedlings were the most attractive portion, and amongst these were many very desirable varieties; but the majority of them could hardly be said to have any decidedly novel and distinct character, either in their colour or its arrangement. The fine collections of E. Forster, Esq., and Mr. Wilson, show these gentlemen to be indefatigable in their exertions to produce a class of first-rate flowers, and this object they will doubtless attain at no very distant period. The best blooms to which names were appended, were the following: - Camilla, a clouded red, and Van Amburg, from Mr. Wilson; Fulgens, deep red, and Enchantress, a pure white, with large dark blotch, from Mr. Pamplin; Queen of Fairies, white, with dark spot, from the Rev. A. Garth; Jubilee, clouded rose, Proserpine, and the Wonder, from Mr. Catleugh. Mr. Gain's Rising Sun was exhibited in high perfection, and is certainly one of the most distinct and valuable kinds of the season. The following are good flowers, but to our taste possessing fewer qualifications than the preceding:-Flash, Louisa, Anna, Superb, and Alicia. Of orchidaceous plants, although bearing no comparison to those at the former shows, there were many very beautiful kinds. We noted the following as being either interesting in their habits and structure, or beautiful in their blossoms :- Miltonia spectabilis, a noble species, with light flowers, and full deep rosy lip; Sarcanthus prostratus, Stanhopea oculata, Vanda tesellata, white, with purple lip; Phajus alba, a tall growing and interesting plant, Maxillaria macrophyllum, Cynoches chlorochilan, with gigantic greenish vellow flowers, Bifernaria atropurpurea, Cirrhæa tristis from S. Rucker, Esq.; Mormodes citrina, Saccalobium guttatum, Galeandra Baueræ, Cattleya superba, from G. Barker, Esq.; Maxillaria cristata, and Cattleya Harrisonia, from Mrs. Lawrence; Stanhopea oculata, from Mrs. Marryatt; Cattleya Mossiæ, Vanda tesellata, Oucidium lanceanum, Oncidium Baueri, Maxillaria vitellina, Cattleya intermedia, Stanhopea saccata, Dendrochilon filiformis, from Messrs. Rollisson.

The collections of Store and Greenhouse Plants were inferior to those shown on former occasions; the same remark applies, with a few exceptions, to the specimen plants. Among the Ericas, which were, generally speaking, in good bloom, a few plants exhibited by Messrs. Lucombe and Pince were splendid. The following are some of the best specimen and miscellaneous plants :- Statice incana, a very neat species, with white calyx, and pink corolla, Phenocoma prolifera, Campanula fragilis, Statice puberula, a most beautiful half-hardy dwarf species. Statice arborea, Roella ciliata, Lisianthus Russellianus, Cuphea Melvillii, Triptilion spinosum, a beautiful little plant, growing about two feet high, with upright stems, bearing leaves deeply toothed, and a head of small bright blue flowers, with a vellow centre, the plant has something of the general habit of Leptosiphon. Lemonia spectabilis, a desirable stove plant, with crimson blooms, resembling those of the orange tree; Lilium exinium, Berberis trifoliata, a very pretty species of Berberry, and a variety of Escholtzia, with double flowers, from Mr. Cutbush, of Highgate.

Amongst those classes more usually designated florist's flowers, such as Carnations, Picotees, Pinks, Heartsease, &c., were some of great beauty, more especially amongst the Picotees. These very beautiful and fragrant plants deserve much more general cultivation than they at present receive. Of several hybrid Fuchsias which were exhibited, F. towardii, a deep rose, and F. delicata, light pink, from Mr. Standish, and F. triumphans, deep crimson, with blossoms of great length, from Mr. Kyle, were among the best.

In turning attention from flora's beauties to the fruit, we must repeat what we have before observed, that the display was highly creditable even to Chiswick. On former occasions we have had to speak in terms of no great commendation, whether the several articles were taken separately, or as a whole; but on occasion in question, they were very good. In the way of Pines, there was a goodly array of fine and well-formed fruit, some exhibited by the Hon, J. P. Locke King, were the most perfect we ever saw. Mr. Errington's Peaches and Nectarines were beautifully coloured, presenting the appearance of clean and healthy growth. Grapes, Melons, and other fruit were generally of good quality, so much so, that it would perhaps be invidious to particularize any. With regard to the Vines exhibited in pots, we certainly think that this branch of culture might be rendered available for purposes which at present seem to be overlooked by many; we refer especially to the practicability of securing both an early and late crop by this means,

with far less trouble, and a greater certainty of success than usually attends the ordinary method. Every one who knows any thing of the forcing department of gardening, will at once admit the disadvantages which attend the stimulation of the Vine during the winter; and yet this must be done if early Grapes are wished for. It is true, that even in pot culture, there would be something to contend with in the season; but the advantage gained would be that of having complete controll over the plants, by which means not only the stem and leaves, but also the roots, could be influenced alike by an increased temperature, which cannot happen when the roots are extended into a border many feet beyond the area of the house, embedded perhaps several feet in cold wet soil, whilst the branches are submitted to a temperature of from seventy to eighty degrees. If planting within the house be offered as a palliation of the evil, it still remains evident that a due degree of artificial heat cannot even there be afforded to the roots.

In concluding this subject, we ought to observe, that the horticultural exhibitions have been well supported during the past season, both by the patrons of gardening, and also by its practical professors; and it is much to be desired that these amicable relations may be continued uninterrupted.

[Since the above was written, we perceive by the account of this show just published in the Gardener's Chronicle, that the number of tickets issued for the present season, has been 22,193, and that 285 gold and silver medals, amounting in value to £744 13s., have been awarded to the various successful competitors.—ED.]

REMARKS ON THE ADVANTAGE OF MENTAL EXERTION, ADDRESSED TO YOUNG GARDENERS.

BY R. B. S.

At no period connected with the history of gardening, has the necessity and advantage of mental exertion, on the part of gardeners, been more apparent than at the present moment. Scientific investigation is removing much of the mystery and uncertainty in which many gardening operations have been enveloped; and discovery following on discovery, attests the energetic manner in which modern horticulturists are prosecuting an enquiring research into the fundamental laws and principles, by which alone the varied operations of gardening ought to be governed. Whilst, however, mental energy is on evidently necessary, especially to those who are entering on their profession, in order that they may place themselves in a position by which they may be able to take advantage of the improvements that are continually taking place around them, and to guard them against

imbibing opinions and erroneous theories on matters which are so intimately connected with their future welfare and prosperity in society; no proposition, however plausibly constructed, nor any theory, however strongly it may be apparently supported by argument, should be received as orthodox, until it has been submitted to such a strict and impartial investigation, as shall so completely separate its elementary parts, that their action upon or connection with each other may become so plainly evident, that no moral doubt may exist as to their correctness; then, and not till then, ought the young gardener to rest satisfied that he may, without danger, receive such as a portion of the knowledge, which he will be benefitted by retaining; and in this manner, it will probably become the foundation of other and still more important principles, the value of which can only be truly appreciated by those who are brought in some degree to feel and experience the want of them.

These observations being offered to the especial notice of young gardeners, it may be enquired how such persons, placed in situations as very many of them are, can be supposed to possess, in the first instance, the requisite knowledge to enable them to analyze and definitively to decide on a theoretical subject, on which the opinions of even the great and learned very often differ. To this an answer is afforded in the sentence with which these remarks commencedmental exertion; the close and diligent exercise of the powers of the mind, is the only means by which such an object can be attained; and difficult as the task may seem, it is not beyond the reach of any individual who will bestow on it the ordinary amount of perseverance which matters of trifling importance are daily and hourly receiving. It is not assumed that all persons would obtain the same climax. even though a similar amount of exertion were made; the different constitutions of individual minds would prevent this from being the But to put the most probable construction on the question, it may be safely asserted that each individual so striving, would so far attain the object in view, as to prompt him to further exertion, and every additional acquirement thus made, will, render the ascent to the summit of any particular science, less difficult.

The necessity and advantage of persevering mental exertion being sufficiently obvious, another important question arises, namely, into what channel would it be most profitably directed; and amongst the many subjects to which importance may be attached, the study of what may be termed the theory of horticulture, comprising vegetable physiology, and the principles on which the growth of plants depend, is especially deserving of attention. The geographical distribution of plants, in order that an adaptation of their natural condition may serve to guide any artificial mode of culture, is a matter of importance scarcely second to any.

. .



The principles by which plants grow, and on which the success of that growth depends, being the most difficult, as well as the most important subject, must receive a more than ordinary amount of application and research; in order, however, to simplify the study of a subject both comprehensive and important, its component parts may be divided into sections, that each may be the more easily acquired. These divisions might be, first, the nature and manner of the existence and developement of plants; secondly, the artificial means most likely to secure and promote these ends; thirdly, their extension or propagation; fourthly, their improvement or hybridization; fifthly, the nature and qualities of soils and manures; sixthly, the application of heat and moisture in their various forms and necessary degrees. This latter information being principally supplied from the important though neglected subject of geographical distribution, a subject which, though it has never received the attention it merits, yet is it of the utmost importance that a knowledge of its principles should be diffused through the minds of aspirant horticulturists, so much of the success of plant culture depending on the proper use of that practical information, which an acquaintance with the native habitat of a plant in a great measure supplies.

There are other subjects besides those I have mentioned, which it will be necessary to attend to promptly, as soon as the foregoing are in some degree mastered—these are botany, in its extended sense; chemistry, as far as relating to soils, &c., drawing, as a necessary means of expressing and elucidating ideas on various subjects; and what may be termed scholastic education, may be regarded as essential in carrying on the daily transactions of life.

REFERENCE TO PLATE LXIV.

STATICE DICKINSONII, Mr. Dickinson's Sea Lavender.

NAT. ORD. PLUMBAGINACÆA. CLASS PENTANDRIA PENTAGYNIA.

The very pretty species of Statice, of which our plate represents a portion, was received from the Cape of Good Hope, in 1837, by Mr. Dickinson, nurseryman, of Guildford, through the kindness of Captain Price, R.N. The plants which that gentleman brought to England, were so much injured by a delay which took place at the Custom House, that on their arrival at Guildford, only one could be revived. Mr. Dickinson had previously received dried specimens of the plant in question, by the aid of which, Captain Price succeeded in obtaining it from the garden of a friend at the Cape. In its native habitat it grows on cliffs, and rocks projecting toward the sea, and from 100 to 150 feet above its level; where from its situation, it must be continually exposed to the saline exhalations and breezes from the ocean: the saline particles have frequently been found encrusting the whole surface of the leaves. In the specimens above

referred to, the flowers were larger, higher coloured, and more abundantly produced than on that which has bloomed at the Guildford nursery; but this inferiority may probably arise from some error in its cultivation not yet discovered.

It is a dwarf shrubby plant, apparently attaining from one and a half to two feet in height. The leaves, which are of a light green colour, having a curious spur or hook-like appendage at their apex, are produced thickly on the stem, which they alternately clasp at their base. The flower stem rises about six inches in height, with numerous branches, which are spreading, and thickly covered with flowers of a delicate pink, with a darker stripe in the centre of each segment of the corolla, the calyx being paler and semi-transparent. It remains in bloom a considerable time.

Mr. Dickinson has kindly furnished us with the following particulars of his plant :- " I received it through the kindness of Captain Price, in 1837. I found much difficulty in keeping it alive, indeed had I not placed the plant under a handglass, with a pan of brine, I believe I should not have saved it; early in the following spring, I took off the top of the plant, and struck it, which was all my increase that summer; the next season my plant improved, and I succeeded in raising four or five young plants. I also planted my first cutting out into the open ground, in a sheltered situation for the summer, when it made but little progress; the following season I tried it in a similar spot, but its growth was not at all satisfactory; in the autumn I took it up, and potted it, placing it in a small house, the temperature of which was from 45 degrees to 55 degrees; it soon showed a flower stem, which was from that time till May before the flowers began to expand. Once or twice a week, I have been in the habit of watering my cucumber plants, with a mixture of brine, or urine and water, in the proportion of one quart of brine, to two gallons of water, and I have used the same for the Statice; I set one plant in a feeder of strong brine and water, but it very soon died. I believe I have not yet found the proper way to manage it. It will not bear our autumnal frosts. The soil in which it has been cultivated with the greatest success is turfy sandy loam, with pounded brick rubbish for drainage. It also requires a considerable share of pot room."

From the idea which a glance at its native habitat would seem to suggest, it is probable it would succeed well if planted in rather a capacious pot, in the centre of which might be placed two or three large or uneven blocks of sandstone, and the plants set on these with a small portion of soil about their roots; in this way, an horizontal direction would be given to the roots, somewhat resembling that in their natural state: the pieces of stone would serve to retain moisture, whilst at the same time they would carry off any water which might happen to be too abundantly supplied them. It is also probable that they would be much benefitted by being placed in a situation where they would be submitted to exhalation from salt water; the use of which, as a feature in the cultivation of this genus, has not hitherto received its due share of attention.

NOTICES OF NEW PLANTS.

IPOMŒ A BATATOIDES, The Male Jalap.

Bot. Reg.

NAT. ORD. CONVOLVULACEÆ. CLASS PENTANDRIA MONOGYNIA.

A beautiful species, of less rambling habits than many others, with rich light purplish crimson flowers, which are not concealed or overshadowed by the foliage; they fully expand themselves in the early part of the day, at which time their brilliancy is far beyond anything we have the means of representing. "It was for many years uncertain what the plant is that furnishes the Jalap of the shops; the upright Marvel of Peru was once thought to produce it; then the Ipomœa macrochisa was taken for its parent, and also Ipomœa pandurata; but it now turns out that Jalap comes from none of these, but it derives its name from the town of Xalapa, in Mexico, in the woods near which it is collected. Dieppe and Schiede being there, found the gatherers of it digging it up, and so possessed themselves of living roots, which on flowering at Munich. proved to be a species of Convolvulaceous plant before unknown, and received the name of Ipomora purgs, under which it is now known in our gardens, although in reality it is a species of Exogonium. But it was also ascertained that other species supply the Jalap gatherers, and Mr. Hartweg has been so fortunate as to acquire at Mestitlan one of them, the Purga Macho, of which he sent two roots to the Horticultural Society; they are larger and longer than those of Exogonium purga, and have produced the beautiful flower now figured. It requires the ordinary treatment of the genus Ipomœa.

POTENTILLA INSIGNIS, specious Cinquefoil.

Bot Reg.

NAT. ORD. ROSACEÆ. CLASS ICOSANDRIA POLYGYNIA.

A hardy perennial, raised by the Horticultural Society from seeds received from the East Iudia Company, through Dr. Royle. As regards its claim to rank as a species, Dr. Lindley remarks that he finds it very difficult to come to any certain conclusion. It may be the means of producing some beautiful hybrids with either P. atrosanguineus or P. nepalensis. The flowers are of a deep orange yellow.

SALVIA HIANS, Gaping Sage.

Bot Reg.

A very ornamental hardy herbaceous plant, introduced by the East India Company from Cashmere, and is certainly one of our gayest perennials, by reason of the striking contrast between the blue and white colour of its spreading flowers, It grows about a foot high, and flowers in May and June, and is easily increased by dividing the old plant in autumn or spring: introduced in 1839.

SCHWEIGGERIA PAUCIFLORA, few flowered Prong Violet. [Bot. Reg.

NAT. ORD. VIOLACEÆ. CLASS PENTANDBIA MONOGYNIA.

A Brazilian shrub, found in wet, shady, stony places, near the river Itahype, in the province of Bahia. The flowers differ from those of the violet in having a calyx, whose divisions are extremely unequal, three being large and heart-shaped at the base, but not decurrent, the other two being very small, and enclosed within the others; the stigma has also a different form from that of Viola. It is a stove plant imported by Messrs. Loddiges, and requires treatment similar to the genus Ixora and others of that description. It was named Glossarrhen by Von Martius, but the right of priority requires that the name Schweiggeria, originally given it by Sprengel, should be retained.

ANGRÆCUM BILOBUM, two-lobed Angurek.

Bot. Reg.

NAT. ORD. ORCHIDACE E. & VANDE E. CLASS GYNANDRIA MONANDRIA.

A pretty epiphyte, a native of Cape Coast Castle, whence it was received by Messrs. Loddiges. The flowers are white, with a slight tinge of blush, growing in pendulous simple racemes, and having a slight but sweet perfume. "To be cultivated successfully, it should be suspended on a block of wood, surrounded by a little sphagnum, care being taken that the latter does not come too near the more

tender part of the plant, which it is apt to rot. It should be freely syringed during the growing season, and never at any time be kept too dry."

CYMBIDIUM PUBESCENS, downy-lipped Cymbidium.

[Bot. Reg.

NAT. ORD. ORCHIDACEÆ § VANDEÆ. CLASS GYNANDRIA MONANDRIA.

Allied to C. Finlaysoniancum, and bicolor; from the former if differs, in having short racemes, smaller flowers, and a hairy lip, with the lamellæ, nearest the end destitute of any appendage; from C. bicolor, the short racemes and hairy lip divide it, but it corresponds with that species, is the remarkable character of a shallow bag being present at the base of the lip. Its habits are rather of a terrestrial nature, so that in potting, it need not be raised so much above the surface of the pot; the latter should be well drained, and plenty of water given in the growing season. "Although not very conspicuous, the rich crimson, green, and yellow markings, give the flower a gay appearance."

CYRTOCHILUM MACULATUM, spotted Cyrtochilum.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A splendid species, having the sepals of a yellowish green colour, spotted with brown, and the lip cream colour, marked with blush. The plants were sent to Woburn Abbey, by Mr. Parkinson.

GOLDFUSSIA GLOMERATA, Clustered Goldfussia.

Bot. Mag.

NAT. ORD. ACANTHACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

A very ornameutal plant, a native of the Mountains of Sylhet, in the East Indies. It produces heads of blue flowers in profusion, some of which are developed throughout the principal part of the year, although its flowering season is the autumn. "A warm damp stove is at all periods uccessary to its perfection, for it is not a plant that loses it leaves or ceases to advance through the winter, the flowers being continually unfolded from autumn till spring. A mixture of loam and heath soil, with a little sand, will form a suitable medium for its roots, and it should be frequently repotted. It is propagated by cuttings.

CALLISTACHYS LINEARIS, Red flowered Callistachys.

[Bot. Mag.

NAT. ORD. LEGUMINOSEÆ. CLASS DECANDRIA MONOGYNIA.

This species is interesting as presenting an unusual colour in the genus; but its blossoms greatly disappointed the expectations raised by the name "Crimson Callistachys," under which it had been received by the Caledonian Horticultural Society. It flowered in 1840, and has no pretensions to beauty. A native of the Swan River Settlement.

STYLIDIUM CILIATUM, Ciliated-leaved Stylidium.

Bot. Mag.

NAT. ORD. STYLIDEÆ. CLASS GYNANDRIA DIANDRIA.

A very pretty little plant, native of the Swan River; producing panicles of yellow flowers. It is extremely different, especially in the colour of its flowers, from any species hitherto introduced to our greenhouses.

PENTSTEMON CAMPANULATUS, Bell-flowered Penstemon.

Bot. Mag.

NAT. ORD. SCROPHULARINE E CLASS DIDYNAMIA ANGIOSPEBMIA.

A native of Mexico, sent thence to the collection at Woburn: the plant figured under this name by Andrews, in an early part of his Repository, is a narrow-leaved variety, and has the greatest affinity with Dr. Lindley's P. pulchellus. The present is a very ornamental species, but probably rather tender. It is cultivated in the greenhouse at Woburn.

EPIDENDRUM GRAHAMI, Dr. Graham's Epidendrum.

Bot Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A very pretty species of Epidendrum, with brownish green sepals, and a white lip striped with pink. It was received at the Edinburgh Botanic Garden from Mexico, and deserves a place in every Orchidaceous collection.

BORONIA LEDIFOLIA, Labrador tea-leaved Boronia.

[Paxton's Mag.

NAT. ORD. PROTEACEE. CLASS OCTANDRIA MONOGYNIA.

All the species of Boronia are regarded as interesting plants, on account of the neatness of their growth, and the very pretty pink blossoms. The compactness and dwarfness of their habit, render them more than ordinarily adapted for greenhouse culture, as when judiciously treated their growth is such as to bear exposure to view on all sides. The present species is intermediate in character between the two groups into which this genus may be divided, resembling B. serrulata and crenulata, in its tendency to rigidity, and straightness in its brauches, and approaching to B. pinnata in its size, general character, and colour of the flowers; these being, nevertheless, of a more expansive kind, and rather richer hue. It was imported many years ago from New Holland, and in cultivation requires treatment similar to its congeners.

SIPHOCAMPYLUS REVOLUTUS, Revolute Siphocampylus.

| Botanist.

NAT. ORD. LOBELIACE ... CLASS PENTANDRIA MONOGYNIA.

The present beautiful species, is a true example of the genus, and altogether unlike the plants known in cultivation as S. bicolor, and S. cavanillesii, which are true Lobelias. Seedling plants were received at the garden of the Caledonian Horticultural Society, from Mr. Low, in September, 1839. They grew to the height of five feet last year, in the stove, without flowering; cuttings were formed, and these rooted readily, and when of small size, produced flowers in February, 1841, of a rose colour, with the segments of the corolla white. It requires no particular soil or treatment.

LILIUM SPECIOSUM, VAR ALBUM, White-flowered showy Lily.

Paxton's Mag.

NAT. ORD. LILIACEÆ. CLASS HEXANDRIA MONOGYNIA.

This most beantiful lily, succeeds admirably in a compost of heath soil, and rich sandy loam. It was introduced from Japan, by Dr. Siebold, and named by him Tametomo, in consequence of its having been brought by that hero from the Loo Choo Islands, as the Japanese assert; he also remarks, that some botanists have made it a peculiar species, under the name of L. eximum. "Whether the variety thus called Tametomo," says Mr. Paxton, "and that now figured are identical, we have no means of deciding; certain it is, that the plant which has crept into British nurseries with the title of L. eximium, is much more nearly allied to L. longiflornm, than L. speciosum." It is rapidly propagated by detaching the outer scales of the bulbs, and planting them in light soil.

HIBISCUS SPLENDENS, Splendid Hibiscus.

[Botanist.

NAT. ORD. MALVACEÆ. CLASS MONADELPHIA POLYANDRIA,

A very handsome greenhouse plant, a native of New Holland, from whence it was sent to this country by Mr. Frazer, in 1828. Its flowers are very large, of a deep pink, or delicate rose colour, with a very dark circle around the centre. It thrives freely in a light loamy soil, and is increased by cuttings.

EPIDENDRUM NUTANS, Nodding Epidendrum.

[Botanist.

NAT. ORD. ORCHIDACE E. CLASS GYNANDRIA MONANDRIA.

An epiphyte of no great beauty, a native of Jamaica, where it grows on trees, among the mountains on the Western side of the Island. Many species of Epidendrum are remarkable for the exquisite odour of their flowers, which they are most apt to diffuse in the evening or during the night; of such is the one before us, which is among the number of plants.

"That keep

Their odour to themselves all day, But when the sun light dies away, Let the delicious secret out, To every breeze that roams about."

PASCALIA GLAUCA, Glaucous-leaved Pascalia.

Parton's Mag.

NAT. ORD. COMPOSITEÆ. CLASS SYNGENESIA SUPERFLUA.

A very showy perennial, recalling to mind the well-known annual sun-flower. It was introduced to this country between forty and fifty years ago from Chill, the mention of which country will be sufficient to show that it is not thoroughly hardy; in severe winters it will be, therefore, desirable to protect it by a covering of old bark, or an inverted flower plot. It is increased by dividing the roots in spring, and flourishes in any loamy soil, which is open and slightly nutritive.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

PHLOMIS SIMPLEX.

An herbaceous plant, from the Himalayas; whence it was introduced by the East India Company. It grows less than a foot high; has deeply heartshaped, crenated leaves, and whorls of dull purple flowers. It is not a plant of any beauty.

MAXILLARIA PLACANTHERA.

A species distinct from M. viridis, to which Dr. Lindley had formerly referred it, "Its flowers have narrower sepals and petals, and far less green, and the form of the middle lobe of the lip is distinct."

MAXILLARIA JUGOSA.

A Brazilian species, imported by Mossrs. Loddiges, and nearly allied to M. placanthera, but having much less linear leaves, and concave oblong petals, narrowed to the base; these parts are of a rich cream colour, speckled with crimson; the lip also is semi-circular at the tip, deeply furrowed, and closely covered with short hair.

CIRRHOPETALUM MACRÆI.

Obtained by Messrs. Loddiges from Ceylon. It has dull brownish yellow sepals, and purple petals, which are falcate, with the point turned outwards. ERIA PULCHELLA.

Gathered at Sincapore, by Mr. Cuming, and lately bloomed by Messrs. Loddiges. It has oval pseudo bulbs, tapering at the base into a stalk, and terminated by a pair of leaves about four inches long. The flowers are in spikes, which were produced from the side of the pseudo bulbs, but which also appear to be terminal; they are dull clayey yellow, of no great beauty.

MISCELLANIES.

THE CULTIVATION OF ORCHIDACEE IS COMPRISED UNDER TWO HEADS, NAMELY, TERRESTRIAL AND EPIPHYTAL-Terrestrial Orchidaceæ should never have a great volume of external air admitted at once, however fine the weather may be. To prevent the house '(which should have a southern aspect) from becoming too hot, a thick canvass shading should be drawn over it during summer sunshine. In the growing season of Orchidacem, a moderately moist heat varying from 65 degrees to 85 degrees; in the dormant season from 60 degrees to 75 degrees, is sufficient; in the season of rest, the house should be kept dry. Orchidaceæ, in pots, should be cautiously watered in the growing season; in the dormant state little or none should be given. The secret of growing these plants is to take care never to kill the old roots; when too much water is given whilst the plants are in a growing state, almost all the old roots invariably perish.-Epiphytal Orchidaceæ may be grown in the same house with and receive nearly the same treatment as the terrestrial species, except that they require to be grown on, instead of in, the soil, attached to blocks of wood, or in baskets, or any rustic construction in the basket way, and suspended from the roof, or by any other suitable means. In the outset before the plants are firmly established on the soil, or wood where they are intended to be grown, it is very necessary to secure such roots as may be already formed, to the wood or soil, by means of bass or pegs, as judgment may direct. The best kind of soil for growing Epiphytal orchidacese on, is found to be good surface peat, cut into pieces of one inch or two inches square; this should be placed over a considerable quantity of potsherds, in order to carry off the superfluous water; and this at the same time, if they are plunged in a tan bed, will allow the heat to rise more freely than if the pots were entirely filled with soil. "It is of the greatest importance to preserve and encourage the roots; and as they are generally protruded near the surface of the soil, it should be raised several inches above the level of the pot, in a pyramidal form, in order that they may have full room to push out." Syringing the plants moderately when in a growing state, till the flowers are nearly expanded, helps their growth much .- Supp. Ency. of Plants.

If a plant which has flowered and fruited for many successive years in a pot, is transferred to a rich soil and warmer situation, it breaks forth into branches instead of flowers. Hence it appears that branches and leaves can be produced from the provision made for flowers, provided circumstances are favourable to their development.—Lindley's Introduction to Botany.

MOVEMENTS PRODUCED BY TOUCH, OR BY EXTERNAL VIOLENCE, ARE YEAR FREQUENT.—The sensitive plant, (Mimosa pudica,) which will rapidly fold up its leaves as if in a state of sleep, is perhaps the most familiar instance; but many others also exist. If the centre of the leaf of Diomaa muscipula, is irritated, the sides collapse so as to cross the cilize of their margin, like the teeth of a steel trap for catching animals. Roth is recorded to have seen something of the same kind in Drosera rotundifolia. If the bottom of the stamens of the common Berberry is touched on the inside with the point of a needle, they spring up against the pistillum. The valves of Impatiens noli-tangere, when the fruit is ripe, separate and spring back with great elasticity when tonched. The column of the genus Hylidium, which in its quiescent position is bent over one side of the corolla, if slightly irritated, instantly springs with a jerk over to the opposite side of the flower. In Kalmia, the authers are retained in little nitches of the corolla;

and as soon as they are by any cause extricated, the filaments which had been curved back recover themselves with a spring. In certain Orchideous plants of the tribe Vandew, the candicula to which the fallen masses are attached, will often, upon the removal of an anther, disengage themselves with a jerk.—Introduction to Bolany.

We have much pleasure in informing our subscribers that Mr. Dickinson has succeeded in flowering his imported Statice, mentioned in a former volume of this work. It has been named S. Dickinsonii, and our subscribers will soon have an opportunity of deciding on its merits, Mr. D. having kindly permitted a drawing to be taken for this work.

The Mignonette is an old and universal favourite, on account of the very pleasant odour emitted by its flowers. In summer, it merely requires the treatment of other hardy annuals; but to obtain flowering plants through the winter and spring months, two other sowings must be made. To obtain flowering plants from December to March, the seed should be sown about the middle of July upon a light rich border, and the plants potted before frost sets in, plunged in old tan or ashes, and covered by a frame which should front the west. Those to flower from March to June should be sown in pots not later than the third week in August, and treated in a manner similar to the November sowing. The third or spring crop to succeed the last, may be sown about the middle of February; these should be placed in a frame with a gentle heat, and the plants thus obtained will be in perfection by the end of May.—Paxlon's Bot. Dictionary.

Among the varieties of Fuchsia, which seem to be well adapted for hybridizing, the beautiful F. corymbiflora, and the interesting F. cordata, are most conspicuous; the peculiar richness and beauty of the flowers of the former render it worthy of a trial to produce them on plants of more restricted habits and less ample foliage, whilst the delicate appearance of the latter and its distinct habit of growth and of flowering, point it out as possessing admirable qualities to blend with those whose general character is more gaudy.

Upon a judicious arrangement of heights and colours, depends much of the beauty and effect of ornamental planting, particularly as far as it relates to the parterre or summer flower garden. This impression being fixed on the mind, it will be an object with the enthusiastic cultivator, to pay especial attention to whatever he may see growing during theseason; in order that when he has added them to his own collection, each may have its proper situation assigned it. Nor will those already in his possession be in this light neglected, their relative position will be minutely scanned, so as, if possible, to detect any little error that might exist, in order that the like may in future be avoided. In such ways as this the attention is aroused, and becomes so far fixed and devoted to its object that a degree of satisfaction follows the exertion, which it is otherwise impossible to experience.

The Calceolaria, as a popular flower, has gone through many improvements both in habit, shape, and colouring, of which some of the splendid varieties now in cultivation bear ample evidence; but, although so much improvement has been effected, much still remains to be accomplished; and, there are two points to which this particularly refers, namely, form, both as regards the bulk of the flower, and its outline; both these qualities exists somewhat near perfec-

tion on distinct plants, but it is necessary that they should be combined in the same flower, size and colouring being also concomitants. In outline some varieties present nearly a perfect shape; but there is in such flowers a general flatness and want of rotundity which detracts much from their beauty. The most objectionable form exists in the long pointed purse-shaped flowers, and also in those which, though of more circular outline, have the edges crenated; whilst, on the other hand, those which possess the desired rotundity of surface, are generally deficient in size. There is thus clearly an extensive field still open to produce a class of flowers combining the two desirable qualities just mentioned, which, when obtained, could soon be followed by increased size and intensity of colour.

The thinness of the rind of a St. Michael's orange, and its freedom from pips, depend on the age of the tree. The young trees, when in full vigour, bear fruit with a thick pulpy rind and abundance of seeds; but, as the vigour of the plant declines, the peel becomes thinner, and the seeds gradually diminish in number till they disappear altogether. Thus the oranges that we esteem most are the produce of barren trees, and those which we consider the least palatable come from plants in full vigour.—Sir W. Temple.

The new rose "Prince Albert," of which so much has been said, does not appear to be distinct as a summer rose either in form or colour, being so near like George the Fourth. Its merit consists solely in its being an autumnal flowering, deep-coloured, and fragrant rose, no autumnal kind being at all like it.

The Amphicome argata, a very pretty perennial plant, from the Himalayas, is just coming into bloom in the Horticultural Gardens at Chiswick. It has been kept in the Conservatory, some in pots being plunged in a larger pot of sand, and kept moist, which precludes the necessity of watering so frequently by preventing the action of the air on the exterior of the pot; others were planted out in the border, and in both situations they appear to grow freely. The plant is rather impatient of water, especially in winter; and it being necessary to raise them from seeds in the autumn or during summer, they require much attention at that dull season.

The medals awarded at the Chiswick Gardens, on the 10th July, were as follows:—Those marked n. are nurserymen or dealers.

Gold Knightian.—To Mr. Barnes, gardener to G. W. Norman, Esq., for a collection of 20 species of Cape Heaths; Mr. Mylam, gardener to S. Rucker, Esq., for a collection of 6 orchidaceous plants; Mr. Butcher, gardener to Mrs. Lawrence, for a collection of 60 stove and greenhouse plants; Mr. Willmot, of Isleworth, for a collection of fruits; n Messrs. Rollisson, for a collection of orchidaceous plants.

Gold Banksian.—Mr. Cock, of Chiswick, for a large collection of pelargoniums; n Mr. Gains, of Battersea, for ditto; Mr. Milne, gardener to C. S. Chauncey, Esq., for a collection of Roses; n Messrs. Lane and Son, of Berkhampstead, for ditto; Mr. May, gardener to E. Goodhart, Esq., for a collection of 6 Cape Heaths; Mr. Insleay, gardener to G. Barker, Esq., for 3 orchidaceous plants; Mr. Green, gardener to Sir E. Antrobus, for a collection of 30 stove and greenhouse plants; Mr. Davis, gardener to Sir S. Clarke, for a collection of fruit,

Large Silver .- Mr. Cock, for a small collection of pelargoniums; n Mr. Gains, for ditto; n Mr. Catleugh, of Chelsea, for a large collection of ditto; A. Rowland, Esq., for Roses: n Messrs, Paull and Son, of Cheshunt, for ditto; n Messrs. Cobbett and Son, of Horsall, for ditto; Mr. Butcher, for a collection of 20 Cape Heaths; Mr. Barnes, for a collection of 6 ditto; n Mr. Jackson, of Kingston, for ditto; Mr. Butcher, for a collection of 6 orchidaceous plants; Mr. Butcher, for a collection of 3 ditto; Mr. Mylan, for a specimen of Miltonia Spectabilis; n Messrs. Lucombe and Pince, of Exeter, for Erica Ampullacea; n Mr. Mountjoy, of Ealing, for Berberis trifoliata; Mr. Barnes, for a collection of 30 stove and greenhouse plants; Mr. Venable, gardener to W. Harrison, Esq., for a collection of 6 ditto; Mr. Vare, gardener to O. F. Meyrick, Esq., for a collection of fruit; Mr. Henderson, gardener to Sir G. Beaumont, for ditto, Mr. Dick, gardener to - Smith, Esq., for grapes (Black Prince); Mr. Bell, of Norwich, for ditto; Mr. Davis, gardener to Sir S. Clarke, for ditto; Mr. Mann, gardener to J. Bishopp, for Pineapples; Mr. Anderson, gardener to the Honourable Locke King, for ditto; Mr. Dick, for Melons.

Silver Knightian .- n Mr. Willmer, of Sunbury, for carnations; Mr. Edmonds, of Wandsworth, for Picotees; n Mr. Willmer, for ditto; n Mr. Norman, of Woolwich, for ditto; Mr. Upright, gardener to G. Ridge, Esq. for large collection of Pelargoniums; n Mr. Catleugh, for small collection of ditto; Mr. Betteridge, Milton Hall, for Roses; n Mr. Jackson, for collection of 20 Cape Heaths; Mr. Venables, for collection of 6 ditto; Mr. Redding, gardener to Mrs. Marryatt, for Stanhopea oculata; n Messis. Lucombe and Pince, for Erica eximia; Mr. Green, for Lechangultia formosa; Mr. R. May, for Roella ciliata; Mr. J. Davis, for Phenocorna prolifera; Mr. Tinsley, gardener to Mrs. Sharpe, for collection of 30 Stove and Greenhouse plants; Mr. Barnes for six ditto; Mr. Bruce, gardener to B. Miller, Esq. for six ditto; Mr. Tinsley, for Cockscombs; Mr. Wilson, gardener to the Duke of Norfolk, for collection of Fruit; Mr. Redding, for ditto; Mr. Balmar, of Croxteth Hall, for Grapes; Mr. Davis, of Chelsea, for ditto; Mr. Dods, gardener to Col. Baker, for Pineapples; Mr. Collinson, gardener to the Marquis of Westminster, for ditto: Mr. Bruin. gardener to R. Gunter, Esq. for ditto; Mr. Judd, gardener to G. Knott, Esq. for ditto; Mr. Errington, gardener to Sir P. Egerton, for Peaches and Nectarines; Mr. Henderson, for ditto; Mr. Haliday, gardener to Lord Londes, for Melons; Mr. Ingram, gardener to her Majesty, for Forced Plums; Mr. Read, gardener to Sir J. Wilson, for Melons; n Messrs. Young, of Epsom, for collection of 6 Cape Heaths.

Silver Banksian.—n Mr. Norman, for Carnations; Mr. Embleton, gardener to T. Barnard, Esq. for ditto; Mr. Bridges, of Carshalton, for Pinks; n Mr. Henbrey, of Croydon, for ditto; Mr. Embleton, for Picotees; Mr. Dickson, for ditto; Mr. Sillet, gardener to R. Alston, Esq. for Roses; Mr. Redding, for ditto; n Mr. Hooker, of Brenchley, for ditto; G. Forster, Esq. for Seedling Pelargonium; Mr. Pamplin, for ditto; Rev. R. Garth, for ditto; E. Foster, Esq. for ditto; Mr. Green, for Seedling Calecolarias; Mr. Mountjoy, for Gloxinia rubra; Mr. Butcher, for Cuphea Melvillii; Mr. Todd, for Seedling Fuchsia; Wm. H. Story, Esq. for Fuchsia formosa elegans; Mr. Frost, for Triptilion spinosum: Mr. Butcher, for Lemonia spectabilis; Mr. Dowson, gardener to W. Leaf, Esq. for collection of 6 Stove and Greenhouse plants; Mr. Mountjoy, for Lilium eximium; Mr. Redding, for cut flowers; Mr. Braid, gardener to H. Parkins, Esq. for Cockscombs; Mr. R. Clarke, gardener to Lady Simond, for collection of Fruit; Mr. Tillery, gardener to the Duke of Portland, for ditto; Mr. Chapman, of Vauxhall, for Grapes; Mr. Scott, gardener to C. Barclay, Esq. for ditto;

Mr. Taylor, gardener to J. Coster, Esq. for ditto; Mr. Wilson, for ditto; Mr. Vare, for Pineapples; Mr. Collinson, for Peaches and Nectarines; Mr. Nicholson, gardener to the Earl of Orkney, for ditto; Mr. Davis, for ditto; S. Price, Esq. Brownton Hall, for Cucumbers; Mr. Clarke, for Melons; Mr. Bruce, for ditto; Mr. Busby, gardener to the Marquis of Downshire, for ditto; Mr. Wheeler, gardener to D. Bevan, Esq. for ditto; Mr. Venables, for ditto; Mr. Vare, for Figs.

The following are the names of the pinks exhibited by Mr. C. Knight, at the Chiswick Show, to which the first premium of the amateurs' class was awarded :

Beauty of Kent Bexley Hero Cousin's 39 Seedling Davey's Lady Shannon Earl of Stafford Heartstone's Queen Victoria Lady Acland - Bloomfield Majestic Omega

Sultana Willmer's Queen Victoria Bray's Invincible Consin's Little Wonder Deakin's Burdett Duke of Bedford Holmes' Coronation Ibbett's Triumphant Lady Hallowell Miss Jeans Norman's Queen One in the Ring

Unique Weedon's Queen Victoria

QUERY .- I would feel much obliged to any Correspondent of the Floricultural Magazine, for a few remarks on the general treatment of Oncidium papilio, Cvpripedinm venustris, C. insigni, and Nepenthus distillatoria. I have no Orchidaceous house, but a Vinery, with a tan pit in the centre. I take out the Vines in November, and use it as a stove during winter. Any information on the best method of cultivating the above plants in the situation described, will oblige A CONSTANT READER.

[Some of our friends who grow the plants in question, will perhaps be so kind as to answer the query .- ED.]

MONTHLY CALENDAR.

FLOWER GARDEN .-- At this season the greatest attention should be paid in keeping this department in order and good keeping, by frequently hoeing and raking the beds and borders; rolling gravel walks; mowing lawns; clipping and trimming the edges of grass verges; and tyeing up, and supporting, any plant that requires it; bulbs that have completed their growth, and have not been previously removed, should now be taken up. Sow seeds of Auricula, Polyanthus, Anemone, Ranunculus, and bulbous rooted plants, in pans, to remain the winter. Transplant Biennials, and Perennials, sown last month; also Carnation layers: the latter into pots, or on a prepared and sheltered border; divide and transplant Donble Primroses, choosing for them a shady situation, where they may also enjoy pure air. Gather seeds of choice plants, where such have been allowed to remain, but excepting such cases, remove all decaying blooms.

PLANT STOVE. - The directions given last month, are applicable also to this. Orchidaceous plants will need strict attention, in order that those which have not completed their growth, may do so as quickly as possible, that their pseudo bulbs may be well ripened; those which are advancing towards this state, will require a

less supply of water; and if any are showing symptoms of resting, that element should be avoided altogether at their roots, and the plants removed to a cooler position in the Orchidaceous house.

GREENHOUSE.—The greenhouse will still be unfurnished with its legitimate inhabitants, and filled up with tender annuals and the duplicate store plants; these will require regular attendance in watering, tying up, &c. Greenhouse plants, out of doors, need the same attention, and proper means should be adopted to prevent the ingress of worms to the pots. Cuttings of Petumas, Salvias, Verbenas, and other bedding plants, should be planted in large quantities, to be kept in small pots through the winter for transplantation in spring into the flower garden: in potting off rooted cuttings, they should be placed in a close cool frame for a few days, and kept shaded. Sow a quantity of Mignonette in pots, placing them in a cold frame, and give plenty of air after they commence growing; ten weeks stocks may be similarly treated: these plants are highly valuable for ornamenting the greenhouse during winter and early spring.

KITCHEN AND FRUIT GARDEN .-- Continue the necessary attention to wall trees, so that the branches may not be injured by wind, or other causes; protect any fruit that may be ripened from the rayages of wasps, flies, &c., and adopt even means to destroy or prevent the increase of insects; finish budding fruit trees, and pay due attention to those first operated on. Sow Spinach and Onions for winter use; Cauliflower towards the end, and Cabbage in the early part of the month, for spring use; Turnips in the early part, and Red Cabbage for next summer; endive for planting in frames, for late spring crop; Lettnee for autumn and winter; Carrots on a slight dung bed, for early spring; Parsley for use next year, and Radishes for autumn. Plant out Broccoli in succession, for winter and spring, Savoy, Green Kale, and Coleworts for early spring use; prick off, and transplant Lettuces, and endive sown last month; plant Celery for a late crop, and Kidney Potatoes, which have been kept over from last year, to produce Potatoes at Christmas; take up the alliaceous tribe when mature; pot Strawberry runners, for forcing; earth up Celery; keep advancing crops clear of weeds; clean, manure, and dry all vacant ground, that the winter crops may be got in without delay.

Forcing Garden.—Pines intended for fruiting in spring, should, toward the end of the month, be shifted finally into the pots in which they are to fruit, and the tan bed at the same time, should be stirred up, adding new tan if requisite; the succession plants should have similar attention, shifting those, and those only, that require it; be careful that the tan bed be not made up too strong, as an injury at the roots is not speedily recovered. The glass roof of early Vineries, and Peach-houses, where the fruit is gathered, should be taken off for the two-fold purpose of preventing the increase of insects, and also of inducing an early state of hybernation; the advancing crops in late houses, should now receive abundance of air, and those whose crops are ripening, should in addition, have the atmosphere kept as dry as practicable; Melons ripening off, require similar attention. Sow Cucumber seed for winter crops, either in houses, or frames; and prune, and water, those in bearing; Cherries and other fruit trees in pot, for forcing, should be removed to a shady border, that an early state of rest may be induced.

PARK AND PLANTATIONS.—Toward the end of the month, evergreen shrubs may be planted, if the weather is moist; a good watering and mulching should be given, and support afforded if requisite; prepare ground for general planting, during the autumn months.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXIV .- SEPTEMBER, 1841,

REMARKS ON THE FUCHSIA.

BY T. M.

The Fuchsia, as a popular flower, has long attracted the attention it so decidedly merits; this assertion being borne out by the unlimited extent to which it is cultivated, and still more by the exertions which have been made in improving it by hybridization—exertions which have perhaps been increased by the success which has attended them. A wide and extensive range is now open to those who have leisure to bestow upon such matters, since the introduction of F. corymbiflora and F. cordata, two kinds most admirably adapted to intermix with some of our older varieties; and if we may take F. fulgens, as a precedent of the success which may be reasonably anticipated, it will surely not be long before some spirited individuals will embark in a speculation so alluring.

But although the Fuchsia does enjoy an important position in the Floricultural world, not only as regards the extent to which it is cultivated, and the variety of objects to which it is applied, but also with reference to the pains which have been bestowed on its improvement, there is certainly one point of view in which during the past season at least it appears to have been somewhat neglected, and that is in the cultivation of specimen plants for exhibition. In many former years, the collections of Fuchsias have formed objects of considerable attraction; and certainly there are few subjects more so, or possessing a greater share of gracefulness and beauty; a reference to the splendid plant of F. formosa elegans, exhibited at the last Chiswick show, will be quite sufficient to support me Besides the intrinsic beauty which Fuchsias in this assertion. have to recommend them, there is another point of view in which they most forcibly attract attention, and by reason of which they deserve the appellation of "Every body's flower." I refer to the hardiness of constitution evinced by at least the majority of the old established kinds, which, beauteous as they are when well

VOL. VI.

treated under artificial stimulus, have at least a commensurate share of beauty when planted in the open ground. I have mentioned their hardiness as a reason why they should be universal favourites; because those who have not the means of affording them artificial protection, may possess themselves of them with a certainty that though the wintry blast may for a period deprive them of their beauty, yet when that season shall have passed away, they will spring up with renewed vigour, and even in some cases, in mild seasons and sheltered situations, the stems and branches will not have sustained any injury, but will remain in a condition to break forth into verdant life when submitted to the necessary stimulus; were a little attention bestowed upon some of the more tender kinds, there is little doubt but that they would survive in similar situations.

In cultivating the Fuchsia in the open ground, little care is necessary further than to secure them a moderately rich soil, and a warm and sheltered situation, supporting the leading stems at an early period; but on no account attempting to interfere with the natural growth of the plants afterwards. A reference to the choice of sorts will, of course, have a considerable effect in producing a show of flowers; for though all may be said to blossom freely, yet there are some kinds that do so in much greater abundance than others. The most tasteful manner of disposing of a collection of Fuchsias, is to devote a bed or beds entirely to them, rather than to intermix them promiscuously with other plants; and besides the superior effect which is thus produced, such arrangements admit of any system of winter treatment being more fully and profitably carried out. most ordinary treatment which Fuchsias can receive during the winter, is to cut them over as soon as their branches are killed down by frost, and then to spread a little litter or long dung around them; but as this could not be carried out in a well kept flower garden, the best plan that can be adopted is to take them up and place them in pots. cutting away about half the length of their branches; they may then be removed to a spare and sheltered corner, and the pots plunged in a bed of coal ashes. They will require no other protection than a little litter spread amongst them in severe weather. When grown as standards and planted out singly on lawns, Fuchsias form very attractive objects; in this case it is necessary to take them up annually and pot them, bestowing a somewhat greater share of protection during winter than has been recommended for the others, the object being to preserve, if possible, the stems uninjured. A very small share of protection would, however, be quite sufficient to effect this.

The cultivation of the Fuchsia in pots, is an easy and simple process, notwithstanding which there are some points connected with it which do not receive general attention. The following routine is re-

commended on account of its simplicity, and the success and satisfaction which attends it :- Early in spring take a sufficient quantity of cuttings from the points of the young shoots in a growing state; strike them as quickly as possible in a gentle hotbed, and when this is effected, pot them singly into small pots, using a compost of rich sandy loam. They should then be placed in a close cool frame, and attended carefully for a few days, until they commence growing; air should then be admitted according to the state of the weather, giving them an abundant share on all occasions when it can be done without injuring the plants. Whilst in this frame, the plants must be kept close to the glass, and the greatest care should be taken that the point of the shoots be not injured or destroyed, as on the preservation of that will depend much of the beauty of the plants; they must also be shifted at intervals as soon as the roots become at all numerous, giving them at each potting one size larger pot, and paying strict attention to the drainage. The leading shoot of each must also be supported by a neat stake, in a perpendicular direction, and a sufficiency of air admitted to keep the plants bushy, for which reason they must still be kept as near the glass as possible. They require a considerable share of water, but it must be given them carefully, pouring it round the edges of the pots rather than washing the soil close about the stem, as is too often the case, to the great injury of the plant, especially such as are naturally delicate. The plants may be thus kept growing in the frames, giving abundance of air, and keeping their leading shoot carefully supported, and re-potting as frequently as the condition of the roots will admit. When they become too large for the frames, they may be removed to a greenhouse, where similar accommodation may be afforded them; but above all, paying especial attention that they are not crowded, and that a free circulation of air is admitted around them. this period they will need an increased supply of moisture, and will be benefitted by a cautious and sparing use of liquid manure. The compost which is best adapted for cultivating Fuchsias successfully should be composed of three-parts sandy loam, or if it can be obtained, loam of a middling texture; this should be enriched by the addition of one part well rotted manure, which latter, if partly composed of decayed tree leaves will be no objection to its use, but rather the reverse: this compost will secure all that Fuchsias are capable of, and is infinitely superior to any of the intricate mixtures which are sometimes used and recommended. As the Fuchsia is a plant which while growing freely requires a more than ordinary supply of water, so does it also need an equivalent amount of drainage afforded it, in order that no stagnant water may lodge about its roots, and so by souring and rendering the compost cohesive have the effect of checking the growth of the plant.

These plants after having been bloomed in pots one season, will be admirably adapted for planting out into the flower garden the following one; and if a quantity of cuttings were annually raised for the purpose of pot culture, a supply would thus be obtained for planting out, and the trouble of raising and potting the old stools would be avoided.

If, however, it were preferred to cultivate them in pots a second season, they would require to be reduced and planted in smaller pots in autumn, and pruned back, the leading shoot to about six inches, and the laterals to about two inches; giving them in spring, when growing, the attention of re-potting, &c. as already directed.

The group of Fuchsias known as the Hybrids, raised between F. fulgens and the older varieties, would require somewhat different It would not, perhaps, be politic in all cases to trust to a small cutting forming a specimen plant; neither, perhaps, would the system of adopting a single leading stem be the most probable means of producing a well defined and agreeably formed plant, the habit of many of them being too erect and not sufficiently branching. best plan to be adopted with these, would be to cut them over at six or eight inches in height, and endeavour to secure as many stems as the strength of the plant would seem to render probable might be brought to perfection. If this were done, and the same attention paid them in potting, watering, and other routine matters as are already recommended, there would be but little cause to fear the result. F. fulgens, and with it may be classed F. corymbiflora, belong to a class still differing from either of the preceding; it has been often recommended to cut over the former at the root every season, and thereby induce it to throw up young shoots from the root or bulb. The chief objection to this mode of culture is the immense size to which the foliage attains, and a general paucity of flowers. A much better system is to allow the plant to become a complete shrub by shortening the old stems rather than removing them; and as far as possible to avoid too much shifting, and too rich and stimulating soils. Under this mode of treatment, the foliage does not attain half the size which it does under ordinary management, whilst the proportion of flowers is considerably increased, and consequently the objection so frequently urged against it is, in a great measure, done away with. It is highly probable that exactly a similar mode of treatment would be found suitable for the recently introduced F. coymbiflora.

The following list comprises the majority of those kinds which are in general cultivation, and being arranged in classes, will thus enable the most inexperienced to follow out the system of cultivation recommended in the present paper. To those included in this list

might be added F. affinis, imported by Mr. Low, and which has not bloomed in this country. The calyx of its flowers are scarlet, with a violaceous corolla. The numerous hybrid varieties which have been raised during the past season deserves the especial notice of the cultivator, and of these the collection of Mr. Smith, of Dalston, are worthy of especial recommendation.

1. Old species and allied varieties requiring the treatment recommended in the former part of this article.

Fuchsia	macrostemon	Fuchsia globosa elegans
	conica	Atkinsonia
	gracilis	Ricartonia
	virgata	splendida
	discolor	magnificent
	multiflora	Thompsonii
	Brewsterii	longiflora
	globosa	coccinea
	major	decora

2. Hybrid Fuchsias, raised between F. fulgens and F. globosa, &c.

Fuchsia grandiflora maxima	Fuchsia magnifica (Smith)
multiflora erecta	invincible (Smith)
pendula terminalis	Dalstonii (Smith)
formosa elegans	mirabilis (Smith)
stylosa conspicua	grandis (Smith)
fulgida superba	insignis (Smith)
Devoniana	conspicua (Smith)
magnifica	arborea (Smith)
Youellii	cornea (Smith)
racemflora	blanda (Smith)

3. Mexican Fuchsias.

Fuchsia fulgens	Fuchsia cordata
grandiflora	splendens
corymbiflore	· ·

4. Fuchsias of slender growth, requiring the same line of treatment as those included in No. 2.

Fuchsia thymifolia	Fuchsia reflexa
mycrophylla	cylindracea.

REMARKS ON THE GROWTH OF CYPRIPEDIUM VE-NUSTUM AND C. INSIGNE.

BY C. R.

In the last number of the Floricultural Magazine, "A Constant Reader" enquires the best mode of treating Cypripedium insigne and venustum in a vinery. The following remarks are offered in reply

to his question, and I shall be happy if they are found to be of service to him.

Supposing his plant of C. insigne to have been growing during the past spring and summer. I would advise him to lessen the supply of water given to it, and induce it to assume a neutral condition, in which it would remain until January, being kept in a dry position in a greenhouse; early in January, it might be brought to a cool part of the stove, and receive a moderate supply of water. As soon as it begins to show symptoms of growth, let it be repotted, removing as much of the old soil as may appear desirable, and re-potting it in turfy peat soil, having the pots well drained, and taking the precaution to set the base of the plant about on a level with the surface of It may then be returned to the stove, and placed in a warmer position, gradually increasing its supply of moisture, but at the same time using discretion not to over water it. Under this treatment it will grow freely, and in due time produce its flowers; and if again gradually brought to a state of rest, and re-potted as above directed, in a few years the plants will attain to a large size. C. venustum thrives well with the same treatment, but from its flowering at a somewhat later period of the year, its season of rest must be provided it accordingly.

Oncidium papilio would no doubt grow in the situation referred to, provided its season of rest were brought to agree with the routine management of the vinery, stimulating it, if possible, early in the spring, and in autumn and winter it might be kept in a warm greenhouse. These plants require some care in potting. A large portion of drainage should occupy the bottom of the pots, and above this they should be filled with alternate layers of crocks, and lumps of turfy peat. The plants should be elevated above the surface, and supported by piling pieces of turf about the roots, fastening them on the pot by means of small wooden pegs. Water at the roots must be supplied very cautiously, even when the plant is in a growing state; and when its growth is completed, altogether dispensed with. If your correspondent were to manage the growth of this plant, so that it might be in condition for vigorous developement at the time he was keeping his atmosphere moist for his vines, there is no doubt but that it would succeed: and there is little cause to apprehend danger at the time the grapes are ripening, from the necessary aridity of the air at that time, as the plant ought to have then completed its annual growth, and be gradually receding to a state of quiescence.

Some other reader will possibly answer the remainder of the query, as relating to the treatment of the Nepenthes.

ON THE CULTIVATION OF CLINTONIA IN POTS.

BY R. B. S.

The beautiful little Clintonia pulchella is most admirably adapted not only for cultivating in the flower garden, but also to flower in pots during spring and the early part of summer; and a more interesting ornament to the greenhouse it is scarcely possible to imagine. The variety of situations which it is admirably calculated to occupy, must also increase it in general estimation; whilst the simplicity of its cultivation must, with irresistible force, remove any prejudice that may exist against it.

The following method of treatment will be found suitable to it:-Early in September sow the seeds in light soil, placing the pot or pots in a feeder kept supplied with water, and finally remove the whole to a gentle hotbed. In this situation they are to be kept until the plants have attained a sufficient size to transplant, which should then be done, planting two or three into a sixty-sized pot, and using a sandy loamy soil, which should have the additional care of being well and effectually drained. The attention they require during winter will consist in placing them in a very airy position in a greenhonse, and keeping them regularly and carefully supplied with water. About February, they will require re-potting into a size larger pot, using a compost, a mixture of one part leaf mould, one part welldecayed manure, and one part good loam and sand. At this stage of their existence, they may very advantageously be submitted to a temperature of 50 or 55 degrees, which will induce them to grow vigorously, and attain a much larger size than would otherwise be the Shifting into larger pots must be continually repeated, as soon as the state of the roots will admit; and in performing this operation, great care should be exercised not to do the latter any injury. twenty-four sized pot is well adapted for blooming them in; and as a preventive to the injury just mentioned, it would, perhaps, be well to shift them rather early into these pots. If such a course is adopted, an abundant proportion of drainage must be given, and the greatest care taken in the application of water, not to saturate the soil, which would at once have the effect, if not of destroying the plants, of so far injuring them as to deprive them of great part of When they begin to shew flowers, they may be their beauty. removed back to the greenhouse, placing them in a sheltered position, and gradually inuring them to a more exposed one. will flower freely for two months and upwards, if the common routine attention is perseveringly bestowed on them, and form objects of great beauty.

RHODANTHE MANGLESII, ITS GROWTH AND GENERAL TREATMENT.

BY AMICUS.

Rhodanthe Manglesii is one of those plants which ever has been, and will continue, to be admired by those who can appreciate real floral beauty. There is something so graceful in its carelessly pendant blossoms; something so soft and subdued in their mild and glossy hue; something so attractive in the whole plant, which at once rivets the attention and deprives us of the ability to view it with any other emotion than that of admiration.

The cultivation of Rhodanthe is simple, though requiring some nicety in the mode of carrying it out. The delicate nature of the roots render the operation of repotting one in which this nicety must be more than ordinarily brought into action; and no less in performing the continually recurring operation of watering, is the most profound carefulness necessary. When, however, these matters are properly attended to, and something like the mode of treatment about to be recommended is carefully carried out, the cultivator will find his exertions rewarded by one of the loveliest forms which even the lavish and unsparing hand of nature has scattered in his path.

The seeds of Rhodanthe should be sown in the early part of September, in well drained pots, using a mixture of decayed leaf mould and light maiden earth; on this the seeds are to be sown, and a very slight covering given them, but just enough to screen them from the light; the pots should then be placed in a gentle heat, and be kept moderately moist. As soon as the seeds have vegetated, and the plants have formed their first pair of leaves, they should be potted singly into small sixty-sized pots, which must be perfectly well-drained, using a compost something similar to that before recommended. plants are to be located during the winter months in a warm position in the greenhouse, and attention paid to repotting them frequently when they show signs of vigorous growth, which will generally happen to be the case sometime in January. The kind of soil to be recommended for these final shiftings, should have a little rotten manure added to the ingredients already mentioned, and the addition of a little silver sand would have a beneficial effect. The size of the pot in which they are to be bloomed, is a point which must be regulated by the condition of the plants. If they have been grown vigorously in their earlier stages, a twenty-four sized pot will not be too large for them; whilst on the other hand, if they were stunted at that period, so as to have induced an early blooming state, they will not require so large a pot, neither will they form such handsome plants. The application

of water has been already mentioned as an operation requiring the greatest exactness in the manner of its performance, and neither is the temperature of that element a matter of indifference, for in all the stages of growth it should be used so far in a tepid state as to avoid altogether the injurious effect of chilling the tender and delicate roots. This remark is not only applicable to the plants in an infant state, but equally so as they advance in growth. In order to secure seeds, which are not very freely produced, the plants, when in bloom, should be kept in an airy position; and it is probable that artificial fecundation would have a very beneficial effect towards securing the object in view. By pursuing the line of treatment here laid down. the plants would, in all probability, be in bloom about the month of April. To obtain earlier flowering plants, the seeds should be sown in August, whilst a later crop, to bloom in May, may be obtained by performing that operation in the early part of October; in either case the treatment of the plant, after the seeds have vegetated, should be similar to that just detailed.

As an out-door plant, the Rhodanthe is deserving of some notice, although in that case it requires, perhaps, a greater degree of care bestowed on it, than plants in such situations generally receive; it is, nevertheless, well deserving of the amount of trouble which becomes necessary to secure its success. The period of sowing the seeds, for this mode of treatment, as in all others, must depend on the time the plants are wished to be in bloom; I should, however, advise a general sowing to be made in the month of October, the plants reared in a hotbed, potted off singly into small pots, and kept on a shelf near the glass in a greenhouse through the winter; about the beginning of February they may be shifted into larger pots, and soon afterwards a warm and sheltered spot of ground should be prepared for them by removing the original soil, and substituting a light rich maiden earth. This should be exposed to the action of the atmosphere, as much as possible previous to planting, by frequently turning it; whilst this is going on, the plant should be kept in a situation to inure them gradually to a somewhat lower temperature than they had been previously enjoying, and much of the success of transplanting into the open ground will depend on the manner in which this is effected: for if not done in the fullest and most perfect manner possible, the plants will receive a check from which it will be difficult to recover them, and, on the other hand, if attempted in too hurried or hasty a manner, the vitality of the plants will be endangered. About the middle of March, the plants may be removed to their station, turning them out of the pots carefully, and placing them in an elevated position, as regards the surrounding soil; when properly adjusted, place an handglass over them, this will afford them sufficient protection, if the point

of hardening them off has been effectually performed, and by the judicious management of which, as regards the admission of air, &c., a steady but vigorous and healthy growth will be obtained. By the beginning of June it is probable that they will have commenced blooming; the removal of the hand-lights must, however, be a matter of consideration: for if the prevailing weather should be either wet or cold, they will continue to need some protection; added to which, the prospect of obtaining a portion of seeds should operate on the mind of the cultivator in favour of continuing to afford them shelter.

In order to have a succession of blooming plants, a sowing should be made in March, and the young plants carefully potted singly, and kept for a short time in some favoured spot, previous to planting them out in the open soil, which latter should be effected in a similar manner to that above detailed, but as the season will be much further advanced, the use of the handlights will be chiefly necessary to protect the plants from heavy rains, rather than to afford an opportunity of elevating the temperature in which they are growing. As the season advances, therefore, and especially if the weather prove auspicious, these may altogether be dispensed with. Under ordinary circumstances it would be scarcely reasonable to expect these plants to be in a condition to mature seeds, and this renders it doubly imperative on the cultivator, to juse his best endeavours to secure these, either from those plants grown in pots, and bloomed in the greenhouse; or from those raised in autumn, and cultivated under the handlights in the early part of the season.

So well deserving is this plant of all the attention that can be bestowed on it, that it would be an object well worthy of trial, to cultivate it in the windows of living rooms; and there is little doubt but that with care and attention it might be brought to thrive, even in this, generally regarded as an untoward situation for delicate plants.

REMARKS ON THE TREATMENT OF RECENTLY IMPORTED TUBERS OF TROPÆOLUM AND SIMILAR PLANTS.

BY M. R.

The continual transmission of seeds and bulbs from Mexico, and other parts of South America to this country, many of which may possibly fall into the hands of persons who have no acquaintance with the best and most proper method of treating them on their arrival, may render any information on such subjects desirable, and it may be, valuable. Amongst the bulbous roots which are in this manner received, those of Tropæolum possess, perhaps, a more than

ordinary degree of interest, from the fact that several species exist in their native habitats, which have not been as yet introduced, and which would form most valuable additions to our collections. The peculiar nature of these bulbs is such as to render it a matter requiring some care in inducing them to vegetate, for being composed of a very light and woolly substance, they are very susceptible of decay, especially if too abundant a supply of the necessary stimulants is afforded them.

Having made these prefatory remarks, I will at once proceed to detail a method which has been very successfully practised in inducing a speedy vegetation. The bulbs when received were so apparently dry and light that it might have been reasonably thought that their vitality was gone, and there is no doubt that had they been at once potted they would have speedily decayed; instead of potting them, however, they were placed in a common pan or feeder, elevated on the bottom of an inverted pot set into a larger feeder full of water, they were then set into a cool close cupboard, and for the first few days no other moisture was afforded them than the amount of evaporation from the water contained in the feeder, and that occasioned by the capillary attraction of the inverted pot. As soon as signs of vegetation were discovered, a few drops of water were sprinkled over the bulbs, and this was repeated at intervals of two or three days, until they had made shoots an inch or two in length. were then taken out of the close cupboard, and placed where they received a small share of both light and air, and this so far subdued as not to injure the young and delicate shoots. From this situation both light and air were given them in gradually increasing supplies, and they were finally potted in sandy loamy soil, the pots placed under a handglass in the greenhouse, and kept for a day or two covered. with thin paper, to break the force of the light, which had it been permitted to beam strongly on them, would, doubtless, have annihilated their delicate stems. No water was given them for several days after potting, the dampness contained in the soil being sufficient to facilitate the egression of roots; and even when they had somewhat established themselves, the greatest caution became necessary in applying that element, or it is probable that they would have discontinued their growth, and altogether resigned their vital spark. in this way alone, by applying gradually those conditions which stimulate vegetable development, that roots which have been impaired by long voyages, and perhaps by being taken up before properly matured, can be brought into a growing state; and even when this has in some measure been secured, the greatest care is necessary in preserving the feeble spark until it has had time to recruit its resources by unfolding a healthy crop of leaves, by means of which

its juices become once more fully elaborated, and, as an attendant consequence, its roots require again their wonted firmness and vigour.

It is to be hoped that the interest excited by a desire to procure the beautiful blue Tropæolums of Valparaiso, will be a sufficient apology for the intrusion of the above rambling observations.

REFERENCE TO PLATE LXV.

LECHENAULTIA BILOBA, two-lobed Lechenaultia.

NAT. ORD. GOODENIACEÆ. CLASS PENTANDRIA MONOGYNIA.

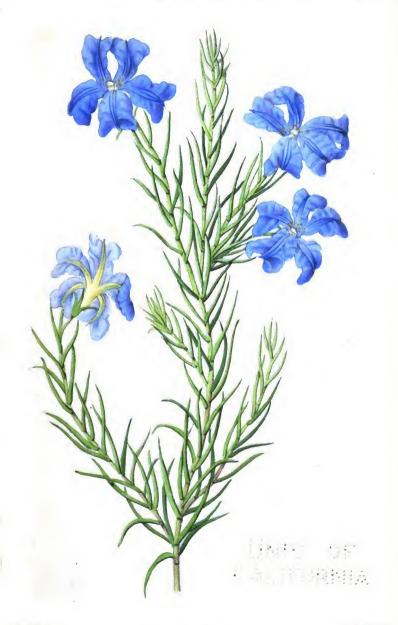
For the opportunity of figuring this beautiful little New Holland plant, we are indebted to Messrs. Veitch, of Exeter, who kindly permitted us to take a drawing of the plant exhibited by them at the Horticultural Society's Garden in June last.

The existence of a blue flowered species of Lechenaultia in this country has, for some time past, been a matter of speculation, being confidently asserted by some, and almost as peremptorily called in question by others; the present season has, however, set all these speculative controversies at rest, by unfolding to an anxious public the beautiful flowers of this charming plant. The doubts that were entertained, however, as to its existence in England, were not altogether groundless, the plant having, to a mere superficial observer, a great resemblance to Burtonia conferta, and as the latter produces flowers of a deep blue or purple, a mistake might easily have arisen without the existence of any intentions to mislead. Besides the present species, there is another called L. violacea, which is said to bear blue flowers, but which has not yet bloomed in this country. In habit, it is more erect and compact than biloba, the foliage also is shorter, but the general appearance of the plant is very unhealthy.

The great beauty and profuseness of flowering so admirably combined in the more common species of this genus, is equally apparent in the one before us, as the small size of the plant from which our drawing was taken will bear evidence; and as far as relates to the beautiful and shown nature of its blossoms, we refer with satisfaction to the accompanying representation.

The high claims, then, which this genus has upon the care and skill of the cultivator, will be a sufficient excuse and apology, for us to plead in laying before our readers a brief description of some of the points in cultivating this plant, which are necessary to ensure its healthiness and longevity; and in doing so we will divide the remarks we have to offer into the three following heads, namely, soil, situation, and the appication of water:—

The soil which is most suitable for these plants, and in which alone they will remain healthy for any length of time, is a turfy sandy peat; by its being turfy, we mean to convey that it should consist only of the fibrous roots of the heather, in a state of decay; and by the term sandy, we imply that it should consist of at least one-fourth part silver sand, the latter, if not naturally existing in the soil, must be supplied by addition, the former quality must be pre-existing. In making use of this soil, it must be borne in mind that it should never be sifted, but simply chopped with a spade, and reduced to a further degree of fineness by rubbing with the hand. As regards the operation of potting, the main roots of the plants must, in the first stage, be



UNIV. OF Callegreea kept in a position near the surface of the soil, so that in all future repottings, by slightly elevating the ball of earth, they may become raised above the reach of danger in the application of water. The pots too must be well drained with broken potsherds, and over these a layer of the most turfy particles of the soil; notwithstanding the objections which have been made of late to the use of "burnt clay" in the culture of plants in pots, by a writer in the Gardener's Chronicle; glazed pots, as recommended by the same writer, especially if used without drainage, would soon render both water and drainage unnecessary.

The situation most suitable for these plants, whilst young, would be a cool frame during the summer season, in which they could be kept near the glass, and shaded from the direct and piercing rays of the sun during the middle of hot days; in winter, a position in the greenhouse, where they could enjoy a foll share of light and abundance of air, without being exposed to a direct current, would be found most suitable, and we can conceive no better situations for them in all future stages. They must not be placed in the open air, even during summer, unless protected efficiently from heavy rain; and if kept in a greenhouse at that season, which is often preferred on account of their extreme beauty, it becomes imperative to provide some means of protecting the tender fibres from the injury likely to be sustained by the action of the sun and arid atmosphere on the pots, this, is, however, easily accomplished, by placing the pot in which the plant is growing into another of somewhat larger dimensions.

In the application of water, the greatest care is necessary, not only in the young state of the plant, but after it has attained a degree of maturity; the best directions we can give for watering are, never to allow the soil to become dry, and on the other hand, not to water so frequently, or in sufficient abundance as to render it anything more than thoroughly moist. In applying water, it should never be poured near the stem of the plant, but always towards the margin of the pots, and at all times it should be of a temperature rather above than below that in which the plants are growing.

The generic name Lechenaultia includes that of M. Lechenault, a French traveller and botanist; the specific appellation refers to the divisions of the cerolla.

NOTICES OF NEW PLANTS.

BERBERIS CORIARIA, The Tanners' Berbery.

Bot. Reg.

NAT. ORD. BERBERACE E. CLASS HEXANDRIA MONOGYNIA.

A native of Nepal, raised by the Horticultural Society, from seeds received from Dr. Royle, 1835. It is a robust hardy shrub, with narrow, lanceolate leaves, and short racemes of large flowers, succeeded by red fruit, without bloom, which affords a mark of recognition. From the specific character of B. Lycium, given in Dr. Royle's "Illustrations of the Botany of the Himalayas," the present appears to differ from that species in its pendulous racemes, short pedicles, and large flowers. It flowers in Jnne, and is increased by seeds, which, if sown as soon as ripe, will vegetate the following spring.

CHOROZEMA SPECTABILE, Showy Chorozema,

[Bot. Reg.

NAT. ORD. LEGUMINACEÆ. CLASS DECANDRIA MONOGYNIA.

A twining Swan River plant, of great beauty, and very easy of cultivation. It

produces long drooping clusters of bright orange-coloured flowers, which appear in profusion in the months of winter. It grows best in a light free soil, composed of peat and leaf mould, with a little loam and sand. Seeds are produced plentifully, by means of which it may be increased, or it strikes readily from cuttings planted in silver sand. The attacks of the red spider must be carefully gnarded against, as they are very fond of attacking its foliage. The plant is well adapted for covering a small trellis in a pot; but it grows more freely, and flowers in greater beauty, if planted out in a light well-drained border.

CONVOLVULUS SCOPARIUS, Canary Rosewood.

Bot. Reg.

NAT. ORD. CONVOLVULACEE: CLASS PENTANDRIA DIGYNIA.

A native of the Canaries, introduced by P. B. Webb, Esq., to the Milford Nursery. It is a half-shrubby plant, producing abundance of small white flowers, but is not, in the least degree, handsome. "Nothing," says Dr. Lindley, "can well be less like a Convolvulus than this, and I presume it will be removed from the genus, when M. de Candolle revises the Convolvulaceous order." appears to be the plant that yields Lignum Rhodium, a wood smelling strong of roses, and yielding, by distillation, a bitter oil, and employed by perfumers in adulterating or alterating oil of roses. The roots which accompany the stems as they are imported, are said to be much stronger scented than the stems. The old writers on drugs, misled by the name, imagined that the product must come from Rhodes, translating the name Rhodeswood, and after hunting in vain in the writings of either ancients or moderns, for the plants that yield it, arriving at the erroneous conclusion, that it was the Aspalath of the Greeks. It is, however, certain, that the name really signifies wood, smelling of roses. Oil of Rhodiam is the name given to the oil obtained from this plant. The wood, when powdered, has been recommended to promote sneezing, and forms an agreeable snuff. It is valued for fumigation, and when burned, diffuses a most delightful fragrance. It is scarcely necessary to add that the rosewood of cabinet makers is quite different from this."

OXALIS FRUTICOSA, Shrubby Wood Sorrel.

Bot. Reg.

NAT. ORD. OXALIDACE E. CLASS DECANDRIA PENTAGYNIA.

An inhabitant of woods, about Rio Janeiro, and requiring to be grown in a moist stove. It possesses the peculiarity of adapting its leaf stalks to perform the functions of leaves, the latter dropping off at an early stage. It is a Wood Sorrel in every part of its organization, except indeed that it forms a woody stem, and so becomes a shrub—and yet how entirely unlike a Wood Sorrel is its appearance! Instead of the pretty irritable trefoil foliage so universal among these plants, it has broad lanceolate blades, with almost the veins of a grass leaf. On looking, however, with some care among the branches, we detect here and there, the triple foliage of the Wood Sorrel at the ends of some of those blades, and so we learn that they too are flattened leaf stalks, made into substitutes for the leaves which drop off." It has by no means a showy appearance.

ERIA ARMENIACA, Apricot-coloured Eria.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

Already noticed in this Magazine, as being a native of the Phillipines, whence it was sent by Mr. Cuming, to the establishment of Messrs. Loddiges, where it has flowered. It has dull flowers, but the absence of any attractive colour in these, is compensated by the rich apricot-hue of the bracts or scales: the flowering stem attains about a foot in height. It should be potted in turfy peat, or sphag-

num, and grown in the warmest end of a damp stove. It does not require so much heat, or moisture, in the resting season; but too great a depression of these, is injurious.

SALVIA TUBIFERA, Tube-flowered Suge.

Bot. Reg.

NAT. ORD. LABIACEÆ. CLASS DIANDRIA MONOGYNIA

A native of Mexico, with the habit of the old Salvia Amoena, but superior to it in beauty. It forms a bush about three feet high, branching, and well covered with leaves, and at the end of every one of the branches there appears the long racemes of slender purple flowers, which are so disposed as to form a drooping or curving ornament. It is not adapted for planting in the flower garden during summer, as its flowers are produced late in the autumn, and during the winter months.

GESNERIA BULBOSA, Bulbous-rooted Gesneria.

Bot. Mag.

NAT. ORD. GESNERIACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This is a most beautiful species of Gesneria, and one which it is much to be regretted is not more generally cultivated. When properly treated, there are none which produces their rich scarlet blossoms in greater profusion than the one in question; the flowers, too, are of great size, which considerably enhances their gaudy appearance. To those who are fond of cultivating really beautiful stove plants, the genus Gesneria possesses very many recommendations.

TULIPA TRICOLOR, Three-colored Tulip.

Bot. Mag.

NAT. ORD. LILIACEÆ. CLASS HEXANDRIA MONOGYNIA.

A small and rather insignificant species of Tulip, with greenish white petals, having a yellow base, and nearly related to T. biflora. It is a native of dry stony places, on the sides of the Altai mountains, and has bloomed in the interesting collection of bulbons-rooted plants at Carlowrie, the seat of D. Falconer, Esq.

BIGNONIA SPECIOSA, Showy Bignonia.

[Bot. Mag.

NAT. ORD. BIGNONIACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

A very ornamental species, imported from Mr. Tweedie, at Buenos Ayres, having been found by him at Uraguay. It is a stove plant, with undulated, glabrous, bright green foliage, and deep purplish lilac flowers, marked with darker veinings. It will doubtless require to be planted in rich soil, and free circulation given to its roots.

PHYSIANTHUS AURICOMIS, Golden haired Physianthus.

[Bot. Mag.

NAT. ORD. ASCLEPIADACEÆ. CLASS PENTANDRIA DIGYNIA.

A fine climbing plant, said to require the temperature of the stove, but which may probably be found to grow well in a greenhouse. It bears white flowers, which open in succession, each flower remaining a considerable time in perfection. It should be planted out in a border of rich soil, in preference to being kept in a pot. It is said to be identical with Dr. Gardner's wild specimens, collected in the province of Ceara in Brazil.

ONCIDIUM MONOCERAS, One-horned Oncidia.

Bot. Mag.

NAT. ORD. ORCHIDACAZE. CLASS GYNANDRIA MONANDRIA.

This is one of the many species of small-flowered Oncidium, which at first sight seem to have little that is beautiful or singular to recommend them, but which, when carefully examined, will be found to possess a very remarkable structure in the flowers; the present exhibits a solitary horn on the upper disk of the labellum, curved upwards, and almost as long as the lip itself: the sepals are green, the petals yellow blotched with rust colour, and the lip three-lobed, yellow, blotched with red in the disk.

GALEANDRA DEVONIANA, Duke of Devonshire's Galeandra.

Paxton's Mag.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

A most beautiful plant, with brownish sepals and petals, and a large prominent white and purple lip. It appears to be a native of South America, as the following quotation from Mr. Schomburgk's communication, inserted in Dr. Lindley's "Sertum Orchidaceum," bears evidence :- "During our peregrinations, we have seen this plant nowhere else but at the banks of the Rio Negro, a tributary of the Amazon; where in the neighbourhood of Barcellos, or Marina, we found it growing in large clustres on the trees which lined the river, sometimes on the Mauritia aculeata, or even on the ground, where the soil consisted of vegetable mould. It was so luxuriant in growth, that some of the large clusters of stems, which sprouted from a common root, were from ten to twelve feet in circumference. The stems were often from five to six feet high; at the lower part almost of a purple appearance, and changing into green higher up." Messrs, Loddiges cultivate this plant in a similar manner to the larger kinds of Dendrobium; potting it in heath soil, mixed with potsherds, and keeping it constantly in a warm humid atmosphere. Specimens are likewise suspended from the roof of the house, on blocks of wood; but it is too spreading a plant, or grows to too great a height to admit of being cultivated generally in this manner. Like the rest of the Orchidaceæ, it is increased by offsets.

ZICHYA PANNOSA, Wrinkle-leaved Zichya.

Paxton's Mag.

NAT. ORD. LEGUMINACEÆ. CLASS DIADELPHIA DECANDRIA.

A very handsome climbing plant, introduced from the Swan River colony, and now becoming generally cultivated. It is allied to Z. tricolor, but is distinguished by its stronger stems, which are clothed with brown hairs—shorter, thicker, and more prominently nerved leaves, the stalks of which are also covered with brown pubescence—a prominent dark velvety down on the calyxes—and denser heads of flowers. To those who are unacquainted with the division of gonus Kennedya into several groups, it may be interesting to refer to the old Kennedya coccinea, as the type of the present genus.

The treatment of the species under consideration with several of its congeners, will be attended with most success if they are grown in large pots, and trained thickly on cylindrical wire trellises; their natural disposition of producing but few leaves and long flower stalks, giving them a rather naked appearance, if some plant is not adopted similar to that recommended as a means of counteracting this tendency.

PERNETTYA AUGUSTIFOLIA, Narrow-leaved Pernettya. | Bot. Mag.

NAT. ORD. ERICACEÆ. CLASS DECANDRIA MONOGYNIA.

An interesting hardy shrub, believed to be introduced by Mr. Cuming, from Valdivia. It is nearly related to Andromeda, and requires no particular treatment.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

MORMODES LINEATUM.

A curious species, a native of Guatamela. It has dull olive green flowers, striped and spotted with dull brown. It is very distinct from the rest of the genus, but by no means pretty.

BOSSLEA PAUCIFLORA.

A little Swan River bush, with winged branches, a few scattered obovate leaves, and yellow and brown flowers, of by no means a striking appearance.

EPIDENDRUM LACERTINUM.

A singular plant from Guatamela, stated to have the habit of Galeandra Baueri. The flowers hang down on long stalk-like ovaries, from one side of a short raceme; they are bright green, with the exception of the column, which is yellow; and the lip, which is a little stained with purple, has very much the appearance of a lizard's tail, the hind legs being outside the flower, and the head and shoulders buried within the cup.

CYPRIPEDIUM BARBATUM.

A very fine herbaceous plant, allied to C. venustum, insigne, and purpuratum; gathered at Sincapore, on Mount Ophir. With Messrs. Loddiges it has produced flowers, which are richly stained with purple, and streaked with green veins on a white ground.

ORNITHOGALUM DIVARICATUM.

A Californian bulbous plant, with white flowers, on erect stems about two feet high.

HELLEBORUS ORIENTALIS.

Received by the Horticultural Society from Mr. Sandison, her Majesty's Consul at Brusa. It proves very different from H. niger, (the Christmas rose, producing large blush flowers on a leafy stem; should it prove hardy it will be a valuable herbaceous plant.

HELLEBORUS OLYMPICUS.

Received with the last, to which it bears some resemblance; but the leaves are smaller, narrower, and not pedate; moreover, the flowers are green.

ERIA POLYURA.

A native of Manilla, sent to Messrs. Loddiges. It is not a species with brilliant colours, for the flowers are small and white, except a deep crimson lip; it is, however, a graceful plant, every leaf producing a long drooping spike from the opposite side of the stem.

ERIA CONVALLARIOIDES.

This plant has at last been obtained by Messrs Loddiges; it has small whitish flowers, collected in close heads in the axils of broad striated leaves; they have no smell. The name convallarioides is unfortunate, for it can only bring to mind in India the sweet Lily of the Valley of Europe, and it is a libel on the latter to compare it with this species.

SACCOLABIUM BLUMEL

A most beautiful species, obtained from Java, by Messrs. Loddiges, and in all probability the Rhynchostyles retusa of Blume. It is very near S. guttatum.

AERIDES BROOKEIL.

A beautiful species, lately flowered by Sir R. Brooke, Bart., after whom it has been named. Dr. Lindley says, "In the magnitude of its blossoms, it infinitely surpasses any other species with which I am acquainted, the lip alone being upwards of an inch long, beautifully tipped with rose colour; the other parts of the flowers are of a brilliant white.

FUCHSIA CORDIFOLIA.

A very striking plant, less beautiful than either F. fulgens or corymbiflora although possessing a better habit. The leaves are heart shaped, and the flowers, which are about two inches long, are pendulous, and of a light orange scarlet, the tips of the petals and sepals greenish; they are produced singly. Mr. Hartweg found it on the Volcano of Xetuch, just below the peak, at an elevation of 10,000 feet above the sea.

PHILADELPHUS MEXICANUS.

A new hardy shrub, from Mexico, with large cream coloured flowers: From its neatness and compactness it will probably be a favourite for forcing.

SCHOMBURGKIA TIBICINIS.

This noble plant has been bloomed by Lady Acland. The flowers are two and a half inches across; a deep pink, speckled with white on the outside, rich chocolate red within; the lip is white in the middle, but deep rose colour at the sides, with a short chocolate red middle lobe. Though it disappoints the expectations raised by its huge pseudo bulbs, and flower stem eight or nine feet long, yet it is a very fine thing.

EPIDENDRUM RANIFERUM.

A fine plant, a native of Mexico, with large greenish flowers, spotted with deep brown. Imported by Mr. Barker.

EPIDENDRUM PHŒNICEUM.

A noble plant from Cuba, introduced by Messrs. Loddiges. The sepals and petals are of a leathery texture, deep purple, a little mottled with green specks. The lip is nearly an inch and a half long, of the clear bright violet of Cattleya labiata, and with the same deep crimson veins in the middle. The plant is still finer than E. macrochilum.

EPIDENDRUM RADIATUM.

A Mexican species, allied to E. fragrans, imported by Messrs. Loddiges. The flowers are pale pea-green, with the lip striated with bright deeper purple rays.

REVIEW.

The Sentiment of Flowers. London R. Tyas, Paternoster Row; J. Menzies, Edinburgh; Machen, & Co., Dublin.

The first three parts of this elegant work we have noticed in a former number, the fourth and fifth parts are now before us, and we have no hesitation in repeating all that we have formerly said in its favour: the same character which marked its first appearance, the

REVIEW. 91

beauty and aptness of its poetical quotations, its interesting botanical information, and the eloquence and refinement which pervades its pages are admirably sustained; whilst the subjects interesting and attractive in themselves, become more so as the work proceeds. From the numbers before us, we cannot refrain from making a quotation on the full blown Rose, which is made the emblem of beauty.

"This beautiful flower, and universal favourite of nature, has never been described in language adequate to convey an idea of its charms, although each poet in turn has made it the theme of song, or introduced eulogiums on its beauty, to heighten the attractions of his poesy.

"Not one of all the train has, however, been able to do justice to its merits, though they have denominated it the daughter of heaven, the ornament of earth, and the glory of spring.

"When it opens its delicate buds, the eye surveys its harmonious outlines with delight. But how shall we describe the delicate tints of its enchanting colours, or the sweet perfume which it enhales. Behold in the spring it raises itself softly in the midst of its elegant foliage, surrounded by its numerous buds. This, the Queen of Flowers and the pride of Flora, seems to sport with the air that fans her, to deck herself with the dew drops that impearl her, and to smile upon the rays of the sun which cause the expansion of her beautiful form.

Proud be the rose with rains and dews

Her head impearling. Wordsworth.

In producing this flower, nature appears to have exhausted herself by her prodigality, in attempting to produce so fine a specimen of freshness, of beauty in form, of exquisite perfume, of brilliancy of colour, and of grace. The rose adorns the whole earth, as it is the commonest of flowers. Poets have had fair opportunities for singing its praises, yet they have not rendered its eulogy common place, but its name alone redeems their names from forgetfulness. Emblem of all ages,—interpreter of all our sentiments,—the rose mingles in the gaiety of our feasts, in our happiness, and in our sorrows. It is also the ornament of beauty, and lends its soft carnation hues to the blush of modesty It is given as the prize of virtue, and is the image of youth, of innocence, and of pleasure. Venus is said to feel that she has a rival in the rose, as it possesses, like her, a grace which is more lovely than beauty itself!!

The following annecdote is narrated by Mr. Phillips in his "Sylva Florifera," on the birth of the rose:—"Flora, having found the corpse of a favourite nymph, whose beauty of person was only surpassed by the purity of her heart and the chastity of her mind, resolved to raise a plant from the precious remains of this daughter of the Dryads, for which purpose she begged the assistance of Venus and the graces, as well as of all the defities that preside over gardens, to assist in the transformation of the nymph into a flower, that was to be by them proclaimed queen of all the vegetable beauties. The ceremony was attended by the zephyrs, who cleared the atmosphere, in order that Apollo might bless the new created progeny by his beams. Bacchus supplied rivers of nectar to nourish it; and Vertumnus poured his choicest perfumes over the plant. When the metamorphosis was complete, Pomona strewed her fruit over the young branches, which were crowned by Flora with a diadem that had been purposely prepared by the celestials to distinguish the Queen of Flowers."

Moore, in his Irish Melodies, gives us a poetical reason for the beauty and delicious perfume of the rose. Others have stated that Love, in a feast of Olympus, in the midst of a light and lively dance, overthrew, with a stroke of his wing, a cup of nectar; which precious liquor, falling on the rose, embalmed it with that delightful fragrace which it still retains.

They tell us that Love in his fairy bower

Had two blush roses, of birth divine;
He sprinkled the one with a rainbow's shower,
But bathed the other with mantling wine.
Soon did the buds,
That drank of the floods
Distilled by the rainbow, decline and fade;
While those which the tide
Of ruby had dyed,
All blush'd into beauty, like thee, sweet maid!

The rose is said to be originally white, Catullus has accounted for its change of colour in the following beautiful lines.

While the enamoured Queen of Joy
Flies to protect her lovely boy,
On whom the jealous war-god rushes,
She treads upon a thorned rose,
And while the wound with crimson flows,
The snowy flow ret feels her blood and blushes!

We regret that our limits will not allow us to dwell at length on the other subjects treated of in the numbers before us. We must, therefore, dismiss them with a brief enumeration; Austerity, Aversion, Baseness, Beauty ever new, Beloved Daughter, Beneficeuce, Birth, Bitterness, Blackness, Bluntness, Boldness, Bonds of Love, Calm Repose, Calumny, Candour, Capricious Beauty, Chastity, Coldness, Confidence, Conjugal Love, Consolation, and Constancy, have each their emblem flower described in the same graceful manner as that which we have quoted, though somewhat more briefly; for which we must refer our readers to the work itself.

MISCELLANIES.

ROOTING OF LEAVES.—I have never found this circumstance more remarkably displayed, than in the case of Echeveria racemosa, (I believe the true Mexican Forget-Me-Not.) The very flower-stalks, when laid apart a few months, like Aaron's rod, have "blossomed' with young plants. My worthy friend, James Cockburn, Eaq., of Guernsey, showed me curious examples of the same kind, in the flower-stalks of the Echeveria gibbiflora. Infant plants studded the flower-stalk long after it was detached from the parent stem. Leaves, and fragments of leaves will strike. The Bryophyllum calycinum is remarkable for the crenatures of the leaf being fretted with young plants, even while yet attached to the parent, and still more so in a state of decay. Various plants, I am aware, exhibit a similar viviparous phenomenon, but I must now content myself with alluding to the facility of striking almost fragments of the Lychnis coronaria, a favourite of mine: not only will individual joints strike, but if each joint be split into two vertically, two distinct plants may be obtained. The Echeveria is, however, the most tenacious of life.—J. Murray, Gard. Chron.

The Potato (emblem of beneficence) is emphatically the friend of the poor. As its fruit cannot well be preserved more than one year, it escapes the monopolising spirit of commerce. Humble and unassuming, like true charity, it hides its treasures, which alike gratify the rich and sustain the poor. America has favoured us with this valuable root, which has for ever banished from Europe that most fearful of all scourges—famine—Sentiment of Flowers.

The right of Tropæolaceæ to rank as a distinct order has been doubted. It contains only three ascertained genera, and only an inconsiderable number of species; yet it seems that we cannot unite these with any of the orders to which they have been thought to be most nearly related. The whole order belongs to Mexico or South America, and the different species of the genus Tropæolum are scattered from the northern limit of the order, as far southwards as Buenos Ayres.—Botanist.

Triptilion spinosum is extremely worth cultivating, not only from the contrast of colour in the outer and inner lip of the corolla, but on account of the enduring nature of the colour of the flowers. It is remarkable, that the part of the corolla which is blue, instantly becomes white on immersion in warm water. It has other claims to regard; for being intensely bitter, it proves a valuable remedial agent in many diseases.—Botanist.

The soil in which Fuchsias are commonly potted, appears to us to contain too great a proportion of heath mould, and not enough nutrimental matter. A sandy open earth may be more porous, susceptible of perfect drainage, and less liable to saturation; but we never saw a Fuchsia killed with water that had not otherwise been grossly mismanaged; and it is well known, that during summer, they have to be watered two or three times, or oftener on each of the hotter days. The blossoms of these plants, sooner than those of almost any other, flag and wither when their roots are dry; and though they are restored by a renewed application of water, they speedily fall whenever subjected to such influences. Altogether, then, we think a rich fresh loam, with but little sand, the fittest soil for Fuchsias; and we would add leaf mould, and thoroughly rotted dung, in small quantities, when the loam is not naturally nutritive. All endeavours to provide against drought will, of course, prove useless, in the absence of the most vigilant attention in administering water during warm weather. On those days when the sun is powerful, they demand liberal supplies, at least twice, and frequently thrice. They should ever be watered from the spout of a pot, held down close to the soil; and syringing will be of great service, if effected towards the evening .- Magazine of Botany.

Seclusion is indispensable for rockeries, on two grounds. First, the beholder requires to be near them, in order to detect their several beauties; as the extent and proportions, and shape, will be too indistinct and petty, to be attractive with a spacious foreground between. Second, they will not mix and combine harmoniously with the other features of a pleasure garden; but have the greatest interest as detached groups, complete in themselves, and neither lending a charm to anything around, nor borrowing from ought their own peculiar attraction, beyond the preparatory influence which the one and the other exercise on the mind of the inspector. From what has been stated, it will, then, be obvious, that a confined dell or hollow is by far the most proper situation for a rockery; and we may now add, that a grotto or a cavern ought ever to constitute a part of

a general rockery, and not be erected in a detached state. A rockery may exist without a grotto, and yet be as ornamental; though the erection of the latter, without some rockwork to accompany it, cannot be recommended or approved.—

Parton.

The cones of Pines were used by the Romans to flavour their wines; having been thrown by them into the wine vats, they float on the surface, along with the scum that rises up from the bottom, as may be seen in the wine tanks attached to inns and farm-houses in Tuscany, and other parts of Italy, at the present day. Hence the Thyrsus, which we put into the hands of Bacchus, terminates in a pine cone. Pine cones, or pine apples, were, in consequence, much employed in Roman sculpture, and the latter appellation, pine-apple, has been transferred to the fruit of the Ananas; from its resemblance in shape to the cone of a pine.—Arb. Brit.

EUONYMUS EUROPÆUA.—The wood of this plant is said to be used by musical instrument makers. For skewers and tooth picks, the branches should be cut when the shrub is in the blossom, for it is tough, and not easily broken in that state; it is also used by watchmakers for cleaning watches, and was formerly used to make spindles—hence the English name of the genus. According to Linnæus, kine, goats, and sheep, eat the leaves, but horsos refuse it: No animal, however, seems to browse upon it, but the goat. The berries are said to be fatal to sheep; they are violently emetic and purgative; powdered and sprinkled on the hair they destroy lice. The shrub seldom attains any great size when growing wild in the hedge, but when planted singly, and properly trained, it will have a strong woody stem, divided into many branches, and when in fruit it has a fine appearance.—Don's History of Plants.

The Syrian grape has long been cultivated in Britain, and although one of the largest growing sorts, has had the misfortune to be also one against which the largest share of prejudice has existed. This we think is in a great measure owing to its being imperfectly ripened, for when grown in a high temperature and allowed to ripen sufficiently, it is far from an inferior grape, although certainly of less value, as regards flavour, than many others; the large size it attains demands for it a place in large establishments. A bunch produced by Speechly in 1781, weighed nearly twenty pounds, and measured nineteen and a half inches across the shoulders, and twenty-one inches and three quarters in length. It is supposed to be the sort brought from the land of Canaan by the two spies, mentioned in the book of Numbers.—The Orchard.

ANSWER TO QUERY.—In the August number of your Magazine, a reader requests information on the general treatment of a few Orchidaceous which he mentions. As I have the plants in question under my care, and like him have no orchidaceous stove, but cultivate them successfully in a vinery such as he mentions, I beg to offer him as a reply to his questions, a description of the mode of treatment I myself pursue. Nepenthes distillatoria, is potted in a mixture of equal parts of good light turfy loam and sandy fibrous peat earth, mixing with it a proportion of chopped moss; when potted, it is desirable to place the pot in which it is placed within another something larger, and then plunge it to the rim in a tan pit: the outside pot will prevent the roots getting burned, if the heat of the tan bed should happen to be violent. The Cypripedium mentioned, will do well if potted in a compost something similar to the above, but with a rather

greater proportion of peat; after potting, they must not be plunged, but placed either on the tan pit, or on a trellis over the flue, if such exist. Oncidium papilio, I grow in coarse lumps of turfy peat, placed as closely about the roots as possible, and I find it desirable, as with many other Orchidaceous plants, to elevate the base of the plant something above the rim of the pot; the whole of the plants named, should have a good drainage of broken pots under the compost in which they are potted. The best time to pot them, would be when the vines were taken out of the house in November, and at that time a strong heat could be kept up to induce a quick and vigorous growth; they will be benefitted by syringing them every day overhead, and may have once a week a gentle watering with a fine rose watering pot; but on no account when the house is cold, let them receive any more water than is just sufficient to keep them alive. The sizes of the pots into which the plants are shifted, must be regulated entirely by the size of the plants, and the state of the roots. Should you think this worth the notice of your Correspondent, it is at your service.

Sheaf House, Aug. 12, 1841.

H. FORD.

[We beg to thank our Correspondent for his reply to the Query in question, and shall be glad to hear from him again.—Ep.]

QUERY.— A Subscriber to the Floricultural Magazine, would feel obliged if any reader who has had the management of seedling Pinuses, would favour him and the readers of the Magazine with a detailed account of the best method of managing them from the seed upwards. He would oblige by especial reference being made to the soil in which the seeds are sown, and the situation most adapted to secure their vegetation.

Ripley, August 14th.

QUERY.—I should feel obliged to any reader of the Floricultural Magazine, who could give me some practical directions on the treatment of the following plants:—Roellia ciliata, Gardoquia Hookerii, and Nierembergia intermedia. The above plants are all of them exceedingly beautiful when well-grown, but have a natural shyness, which very frequently thwarts the wishes of the cultivator.

C. H. N.

QUERY.—Will you, or any of your Subscribers, have the goodness to favour me with a few remarks on the best method of treating Nelumbium speciosum, so as to insure its flowering. The management of plants raised from seed, embracing the particulars from their infant state to that of inflorescence would much oblige

MONTHLY CALENDAR.

FLOWER GARDEN.—One of the principal operations of the present month will be to remove such annuals or other plants as may have done blooming, or have become shabby, supplying their place from amongst the reserve collection; for this purpose, it is desirable during summer to grow a quantity of plants in pots, such as Fuchsias, Verbenas, Geraniums, Calceolarias, and similar plants, so that these may be plunged in their pots, to fill up the vacancies that may occur. Gather seeds of choice plants, tye up, and support such plants as require it; hoe and rake the beds and borders frequently, to keep down weeds. Sow

Auricula and Polyanthus seeds; also seeds of bulbous-rooted plants, and some kinds of Perennials; these must be kept in a cold frame in winter. Take up and divide herbaceous plants, when decirable, and transplant seedlings; pot Carnation layers, and plant out cuttings of Pinks and Heartease which have taken root: fresh pot Auriculas, and propagate by offsetts; shelter tender plants from heavy rains; weed and roll gravel walks, and mow grass lawns frequently.

PLANT STOVE.—During this month many of the plants placed in the open air will require placing in the greenhouse, and, therefore, those plants which, during summer, were taken to the greenhouse from the stove, must be returned to their situation; in doing this, take care not to excite them to growth, but by giving them plenty of air, and diminishing the supply of water, endeavour to secure a state of quiescence. Re-pot all free growing specimen plants that require it, and let those which are growing freely have a good supply of water, and plenty of room to grow; orchideous plants, that require it, may be re-potted, and kept in a growing state, they should be allowed to become rather dry than otherwise, previous to performing this operation. Decrease the supply of water to those which are receding to a state of rest; and avoid watering altogether when such is attained.

GREENHOUSE.—Re pot all greenhouse plants that require it, and towards the end of the month remove some of the delicate kinds of plants from the open air, to the house; propagate by cuttings, all plants suitable for planting out in the flower garden, and place them singly into small pots; pot bulbs of Narcissus, Jonquil, &c., for early forcing, and plunge the pots; take up and pot Neapolitan violets, which have been planted in rich soil during summer, and plunge the pots in a cool frame: place every thing in readiness to receive the plants for their winter station.

KITCHEN AND FRUIT GARDEN.—Gather all kinds of fruit as it ripens; continue to attend to wall trees, and others, in affording support and to removing useless shoots; plant young fruit trees; attend to budded trees, and let the bandages be duly loosened. Sow salading, radishes, and lettuce, the latter to stand in sheltered situations during winter; prick off cauliflowers and lettuce into frames, to remain the winter; plant out the brassica family in succession, and celery for a late crop; plant endive in a warm spot, to be removed into frames; transplant herbs; earth up advancing crops in dry weather; hoe and weed when requisite: in taking crops, remove all the decayed leaves, haulm, stumps, &c., to the vegetable yard; hunt out and destroy snails and slugs; make up mushroom beds for winter.

Forcing Garden.—Attend to young pine plants, in giving water and air, as by good management they will grow more in this month than any other, for which reason see that there is no declension of heat in the tan bed; provide toward the end of the month a quantity of bark to renovate the beds in the fruiting house, and make them up for the winter; the plants from which fruit is cut at this season, should be trimmed up, and put into a spare pit, to furnish suckers to plant in February; make gentle fires according to the season, keeping the temperature moderate; attend to the late crops of grapes, that a dry atmosphere is kept, and plenty of air admitted in dry weather; make fires at night and in damp days, to prevent the fruit from decaying; apply linings to late crops of melons, and be cautious in the use of water: attend to cusumbers, both in frames and houses, keep up the temperature, and admit air with caution.

PARK AND PLANTATIONS.—Plant trees and shrubs generally, choosing favourable weather; thin woods and coppices, &c.; commence operations on ground, and other matters connected with landscape gardening.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXV.—OCTOBER, 1841,

OBSERVATIONS ON THE IMPORTANCE OF AFFORD-ING TO PLANTS A SEASON OF REST.

BY T. M.

The vast importance of affording to plants a season of repose, as well as one of stimulation and excitement, is sufficiently attested by a glance at the arrangements of nature; where we may continually observe some plants receding to a quiescent state, and others springing up with vigour, and rapidly unfolding, and developing their peculiar grace or beauty. It is in connection with this branch of the floricultural art, that the study of the geography of flowers becomes important; for, though all plants require, and naturally receive a season of rest, yet the circumstances under which it is brought about, no less than its duration, becomes a subject of diversity, almost as endless as the nature of the plants themselves. The Cacti of Mexico, the bulbous progeny of the Cape, and the commonest weed in our own country, all require and enjoy their own peculiar season of repose, the difference being only in degree, and not in principle; and, even in the most favoured parts of the world, the Tierra templada of Mexico, where, at the height of 4,000 to 5,000 feet, there reigns continually the genial climate of spring, the excess of heat and cold being alike unknown, even in this favoured region, the same principle is in operation: for at Xalapa, which forms part of it, the Ipomœa purga, a native of woods there, is found to die down annually in precisely a similar manner to our own Convolvuli. In the case of evergreen shrubs, in our own stimulating climate, where, notwithstanding coldness, we have continually a degree of humidity, almost sufficient to keep the vegetable kingdom in a state of excitement; even here these trees and shrubs, if not as in other cases, positively reduced to a stationary condition; yet have their vital energies so far subdued for a season, that they may be said to enjoy a repose peculiar to themselves, accompanied, and perhaps produced in this case by atmospheric coldness.

It is not, however, a depression of the ordinary temperature, that constitutes at all times the winter of the vegetable race, for we sometimes may observe plants, especially bulbous-rooted ones, die down entirely during the summer months, and spring up again either on the return of autumn or spring. In tropical countries, dryness, more particularly than coolness, is a mark of the resting season, the summer being on the other hand excessively humid. In extra tropical countries the variations of heat and cold, aridity and humidity are considerable, occasioned generally by local causes. Some tracts of country, which in winter are excessively cold, are during summer intensely hot, such is the case at Bagdad, in some parts of Persia, America, and Mesopotamia; whilst at the Cape, where the temperature does not undergo such fluctuation, the periods of dryness, and of deluging rains, are found to alternate with each other. The Karroos, a very extensive district of plain country at the Cape, are submitted to this kind of alternation; they are destitute of running water, with a soil of clay and sand, lying on the solid rock. dry season this is reduced by the action of the sun upon it to nearly the consistency of a brick; the tribes of succulent plants, have alone the power of remaining green, the bulbs and iridaccous order being decayed, and beneath the surface; notwithstanding the heat they are able to survive beneath the sun-burnt crust, because it is now that they are enjoying a state of repose, to which nature has submitted them, and which appears to be necessary to their existence. As soon, however, as the wet season returns, these bulbous roots are reached by the rains; they swell while in the bosom of the earth, and at last develope themselves so simultaneously, that the before desert plains become at once converted into a seat of verdant beauty. the Mesembryanthemums and Iridaceæ display their brilliant flowers; but these in a few weeks disappear, their verdure fades, and hard dry stalks alone remain; the rains have ceased, the hot sun of August, when in those latitudes the days begin to lengthen, complete the destruction of the stragglers which were left, and the plain again sinks into aridity and desolation. In other parts of the globe the temperature is considerably increased during the season of rest, of which the Canaries afford an example; whilst in tropical countries the seasons of growth and rest are equally marked by the periodical rains and alternate drought.

From what has been said, it must be evident that the cessation of growth in plants is a most important phenomenon, occurring equally in hot and cold countries, and, therefore, not applicable in its artificial adoption, to one particular class of plants, but alike to all; under no circumstances ought it to be overlooked, for there can be no really good gardening where this is either neglected altogether or unduly

attended to.

It will have become evident, that the rest of which we are speaking, is brought about in one of two ways; either by a considerable depression of the ordinary temperature, or by a degree of dryness, under which vegetation becomes suspended. The former generally takes place in temperate latitudes, and the latter in more tropical regions; but both are assimilated, in a greater or less degree, in all latitudes; and hence arises the importance of geography in gardening, to enable a person, when once made acquainted with the name of the locality from whence a new or valuable plant is brought, to imitate not only the temperature, but also the variations of its seasons.

The way in which the physical powers of vegetables are affected by this, becomes a question of importance, and the following will supply the necessary information :- "The long days, bright light, and elevated temperature of summer, having pushed the powers of vegetation to their limits, towards the end of the season excitability becomes impaired, all the vessels and perishable parts are worn out, leaves choke up, and can neither breathe nor digest, and the system of a plant, by the exhalation of aquæous matter, becomes, as it were, dried up, and exhausted. At that time, the temperature keeps falling, and light diminishing, till at last, upon the arrival of winter, neither the one nor the other is sufficient to excite the vital actions, and the plant sinks into comparative repose. At this time, however, its vital actions are not arrested; if they were, it would be dead, or absolutely torpid: they are only diminished in intensity. The roots continue to absorb from the soil food, which is impelled slowly into the system, whence it finds no exit: it therefore gradually accumulates, and in the course of time refills all those parts which the former summer's expenditure had emptied. In the meanwhile, the excitability of the plant is recovered by rest, and may be even conceived to accumulate with the food that the absorbent system of the roots is At length, when the temperature of the season has reached the requisite amount, excitability is once more aroused, an abundance of liquid food is ready to maintain it, and growth re-commences, rapidly or slowly in proportion to the amount of excitement. the length of previous repose, and to the quantity of food which had been accumulated.

In hot countries, where winter (in its general acceptance) is unknown, the requisite periodicity of stimulus and rest is provided for by what are called the dry and the rainy seasons; the former being equivalent to the winter, and the latter to the summers of the northern latitudes."—Theory of Horticulture.

The adaptation of these principles in the cultivation of exotic plants, forms one of the most important offices of the gardener; but it is not in this way alone that the knowledge of the benefit of resting

plants becomes subservient to his interests. One of the tasks which he has to perform, and one of the most precarious, is that of producing both flowers and fruit, at an unnatural season, and having learned that he cannot do this successfully, without previously affording his plants an imitation of winter, he puts this knowledge into active exercise; and hence it is that he removes his lights from the vineries and peach-houses, and places them which are removable in a northern situation, and deprives them of a portion of their fluid food. The effect of this treatment is to arrest the growth of the plants, and to favour the deposition of the matter necessarily required for the produce of the succeeding season. It is this knowledge of the proper time, and mode of resting flowering plants, that they are brought to bloom at seasons altogether foreign to their natural habits; and in the cultivation of all plants it is the means of increasing, both in quantity and quality, the blooms produced by an individual plant. It is this knowledge that enables the culturist to receive with satisfaction and assurance what to him are the unknown productions of foreign lands, and which enables him to cultivate them in their artificial habitations, and sometimes to eclipse the splendour which they assume in their native habitats.

T. M.

ON THE GROWTH OF CYPRIPEDIUM VENUSTUM, NEPENTHES DISTILLATORIA, AND ONCIDIUM PAPILIO.

BY J. PLANT.

Being successful in cultivating the above plants, information on the general treatment of which was the subject of a query in a recent number, I beg to offer the following as a reply.

For a moderate sized plant of Oncidium Papilio, take a pot of No. 12 size, invert a small one over the hole at the bottom, then fill the pot about half full with large crocks; for compost, mix up turf broken into small pieces, adding about one-fourth part pieces of wood, and one-fourth part of small cracks: in potting, take care to place the plant above the level of the rim of the pot; make the whole firm, by means of hook-pegs, or stakes, and give a good watering. The species require at all times a moderate supply of water; more, when making its growth; and most, when the blooms are opening. The Cypripediums should be grown in pots according to the size of the plants, filling them half full of large crocks; and for compost, use turf broken into small pieces, adding one-fourth part of small crocks; in potting, elevate the plant so as to be above the level of the rim of the pot, and supplying them with plenty of water when

growing and blooming; for some time after blooming they require but little. Nepenthes Distillatoria grows well in pots rather large for the size of the plants, having a small one inverted over the hole at the bottom, until the pot is half full; for compost I use sphagnum and small crocks, adding a few pieces of turf; finish off with the plant, being on a level with the rim of the pot, and give a good watering, afterwards place the pot in a bottom or feeder, half filled with sphagnum; at all times water freely at the root and overhead, giving the most liberal supply in hot weather; after it has bloomed I cut the stems down to three or four eyes, which keeps the plant low and bushy.

I recommend that all the plants be placed on the flues, or hot water pipes of the vinery, but not in the hottest part, allowing them plenty of light, and affording them no shading.

ON THE CULTIVATION OF GREENHOUSE PLANTS.

BY S.

Liparia.-Among the genera which I have noticed in previous papers, I have had occasion to mention some splendid old plants that have been nearly lost to our collections; in fact, the rage for novelty, at the present time is so extensive, that almost any plant, provided it is called "new," is immediately purchased, and the most assiduous care taken in its cultivation; to the exclusion, in many cases, of far handsomer plants, but which have not the charm of novelty to recommend them. How seldom do we meet with the Liparia sphærica in collections? And, yet, how few plants can compete with a well grown plant of it, decked with its splendid globular, and graceful heads of flowers! The soil most suitable for the growth of the Liparia, is good turfy peat, well broken with the spade, but not sifted, to which, if not already contained in it, should be added a little silver sand. Like most other hard-wooded Cape plants, it should be potted early in spring; in shifting, drain the pots well, and avoid overpotting, as nothing is more injurious to delicate hardwooded greenhouse plants. The size of the pots used must depend entirely on the state of the roots of the plants; if the plants are small, yet healthy, and are filling their pots with roots, they may be shifted into a size larger, but not more; if, on the contrary, the roots are few, or in an unhealthy state, they had better be kept in pots as small as possible, and not shifted into larger ones until they make healthy roots, in considerable abundance: * again, if the plants are

^{*} We quite agree with our Correspondent in his remarks in re-potting plants with their roots in an unhealthy state; when such is the case, nothing can be more

large and healthy, they may be shifted into a good sized pot, in which they will continue to grow for several years. They require to be kept in a cool and airy part of the greenhouse, and not to be crowded among other plants, (an error of too frequent occurrence:) they also require to be kept within doors during summer, and to be shaded a few hours each day from the scorching rays of the sun-Under this treatment L. sphærica will form one of the most splendid plants the greenhouse or conservatory can boast of. Cuttings of the tops of the young wood taken off about June or July, prepared in the usual manner, and planted in sand, under a bell glass, and plunged in sand or sawdust, in the propagating house, will root tolerably freely.

Hovea .- The greenhouse and conservatory are, during spring, adorned with many interesting and splendid New Holland plants; and among the many beautiful ones, then to be seen in flower from that very prolific country, few surpass in beauty, a good specimen of Hovea celsii with its innumerable rich blue flowers. This plant, like most other valuable ones, requires its own peculiar treatment to grow it to perfection; for certain it is, that even large and established plants will sometimes suddenly die without any apparent cause. The remarks on soil applied to the preceding genus are suitable also to this; they also require to be re-potted early in spring, in doing which, the soil must be rendered quite firm about the roots; if the plants are large and well rooted, it is better to shift them into large pots, in which they will grow much better than if their roots are confined within the limits of smaller ones, it being one of those plants which does not appear to like to have its roots cramped; in fact, there is no place which suits it so well as the border of a good conservatory, in which, by its freedom of growth and profusion of flowering, it seems to enjoy a situation somewhat equivalent to its Most of the species ripen seeds rapidly, which native habitat. should be sown in February, in light sandy peat, and placed in the propagating house, or cool part of the stove; as soon as the seedlings have made a couple of leaves, they ought to be potted off separately, in thumb pots, in very sandy peat earth, and kept in the propagating house until they get established, after which they may be treated as older plants. Hovea celsii, villosa, pungens, illicifolia, longifolia, linearis, lanceolata, Manglesii, and mucronata, are splendid plants, and will grow freely under the treatment recommended above.

Indigofera.—This extensive genus contains plants both from the tropical and temperate zones, and amongst other species, highly

injudicious then to increase the size of the pots. Our Correspondent may, perhaps, be induced to enter more fully into the details of managing and nursing sickly plants.—Ed.

interesting and ornamental, it includes the plants from which the valuable Indigo of commerce is obtained. At present, however, I intend to notice only a few of those which, on account of their beauty, are cultivated as greenhouse plants; and of these the I. austialis is one of the best and handsomest with which I am acquainted, and which deserves to be cultivated in every establishment where there is a sufficiency of accommodation. It delights in a good turfy peat soil, well broken with the spade, as previously recommended for the preceding genera; it also requires plenty of drainage, and some care in the selection of pots at the time of shifting. If the plants are small or delicate, they must be confined to proportionately small pots; but if large, and in an healthy and vigorous growing state. they may be shifted into a good sized pot, in which they will continue to grow, and flower freely. It will also grow and flower admirably in the border of a conservatory, and most of the greenhouse species will thrive freely under similar treatment, but care must be taken not to overshift the more delicate species, these when re-potted ought only to get a pot one size larger, and that only when the former ones are filled with roots; they also require to be kept in the greenhouse during summer, and to be shaded as recommended for similar Cape and Australian plants. Indigofera Australis, atropurpurea, angulata, angustifolia, denudata, filifolia, frutescens, sarmentosa, and stricta, are pretty plants,

[We may just remark on the subject of Indigoferas, that we have seen them growing very vigorously in a soil somewhat differing from that recommended by our Correspondent: that to which we refer is a mixture of turfy peat and sandy loam, in nearly equal proportions, rendered sufficiently porous by the addition of sand. When a compost similar to this is used, perhaps a greater amount of care in watering may become necessary, from the natural disposition of loamy soil to retain water; but we think that plants thus treated possess a more vigorous constitution, and are longer lived than those grown entirely in peat earth. The reason why this may be the case, would appear to us to arise from the checks which a plant growing in peat earth alone is liable to undergo from the effects of drought; every one who is familiar with the culture of plants, must be aware that excessive evaporation on a hot day, sometimes deprives the soil in a pot of nearly all its moisture, and when peat earth is reduced to this state, it is a considerable time before it again becomes charged with sufficient quantity to supply the wants of a plant; this may sometimes happen from unforeseen causes, which do not involve any portion of culpability on the part of the cultivator, although in very many instances, the effects may be fatal.]-ED.

NOTICE OF THE AUTUMNAL EXHIBITION OF THE SOUTH LONDON FLORICULTURAL SOCIETY.

BY THE EDITOR.

The third and last Fete of the Royal South London Floricultural Society, took place at the Surrey Zoological Gardens, on Tuesday, the 14th ult. The day was propitiously fine; on which account, and owing to the attractions offered to visitors, the concourse was immense. Besides the various tents devoted to flowers and fruit, and which drew a considerable number of admirers, the menagerie was, doubtless, the leading object with many; whilst the lovers of music and pyrotechnics, were severally gratified by the performances of the unrivalled band; the magnificent illumination of St. Peter's, in the colossal panoramic view of Rome, from the Tiber; and the fac simile of the gorgeous "Girandola di St. Angelo," in which was introduced a superb emblematic device, representing a vase, occupied by an immense and magnificent bouquet.

As is usual on similar occasions, the chief subjects of exhibition were, dahlias, greenhouse plants, heartsease, miscellaneous cut flowers, fruit, and vegetables.

The dahlias were exhibited in considerable quantities; and, taking the unpropitious nature of the season into consideration, the blooms were, for the most part, exceedingly fine; those of Messrs. Willmer, of Sunbury, to which the first prize was awarded, together with Mr. Gains's collection, and those from Mr. Knight, of Kentish Town, struck us as being particularly well bloomed. In the gardeners' class were also many very superior stands, but, owing to the diversified nature of their occupations, it would be unreasonable, in a general sense, to expect them to produce blooms equal to those grown either by amateurs or dealers. In the tent devoted to the seedlings were many good blooms, but nothing which struck us as being decidedly Amongst the best was a white, named the Bride of Lammermoor, from Mr. Meade, of Lewisham, and a lilac, called Lady Harland, from Mr. Jeffrys, of Ipswich. The Orange Perfection, of Mr. Gains, is a decidedly good flower, and perhaps the most unique and dissimilar of any that were exhibited.

The general appearance of the greenhouse plants was very meagre, notwithstanding which, there were some of considerable merit. Amongst these were two fine plants of Crowea saligna, and a Trevirania pulchella, from Mr. Bruce, of Tooting; a Baronia denticulata, Passiflora Buonapartea, and Selago Gallacii, three and a half feet in height, from Mr. Atlee; healthy and well-bloomed plants of Lisianthus Russellianus, from Mr. Couts, and Mr. Cuthill, of Love-walk,

Camberwell; several elegant varieties of Petunias, from Mr. Jackson, of Kingston; small plants, about two feet in height, of Fuchsia corymbiflora, in bloom, from Mr. Denyer, of Brixton; and a large plant, eight feet in height, and about five feet in diameter, with nineteen clusters of blooms, from Mr. H. Tansley, of Croydon; thus proving, that although this plant will form a splendid bush, or almost a tree, yet it can also be induced to flower, when of a comparatively small size. Mr. Groom exhibited eight plants of Lilium lancifolium album, in splendid bloom. These plants diffused abundantly around them their delicious and balmy odour. Mr. Wilson had a rather large plant of Gloxinia rubra, the flowers of which were, however, rather dull in colour. There was an extensive competition amongst Asters, the blooms of which were very good. We observed a large stand filled with a variety named British Queen, from Mr. Halley, of Blackheath. The petals of this flower are flat and expanded, of a Of miscellaneous collections of cut flowers, the deep blush colour. stands of Messrs. Davis and Mosely, of Brixton, and Inwood, of Putney, were very good. One from Mr. Bruce contained many new and valuable kinds, and being arranged in small, compact, but distinct bunches, had a much better effect than when crowded together promiscuously. Mr. Bushell, of Kennington, had a device, composed of the Royal initials and a star, which was rewarded with a prize. We were rather surprised not to have seen more competition in this class, which we regard as one of importance, equally with that of forming model designs of landscape gardening, these things affording an impulse to the development and improvement of taste in the higher branches of the profession.

The display of fruit and vegetables was not very extensive; neither was there anything exhibited in these classes which could claim more than a passing notice.

We would make one remark on these exhibitions, before quitting the subject, and sincerely hope that the Managers will adopt some means to prevent in future the inconvenience we are about to mention. We refer to the want of order and regularity in the movements of so large a body of persons, when inspecting the flowers, as they are arranged in the tents, which occasions much inconvenience, as well as confusion, it being almost impossible to gain a view of many objects, especially the most attractive ones, without considerable effort; and we should think it a matter of question whether many of the female visitors ever procure even a distant glimpse. This, we think, might be avoided, simply by requiring the visitors to pass on one side of the tables, and return by the other; whereas, at present, each individual would appear to be moving in a contrary direction to those around him, to the annoyance of each. Another point which

VOL. VI.

would constitute a great improvement, would be to peremptorily require every article, whether plant, flower, or fruit, to have a distinct and legible name affixed to it. This would have a two-fold beneficial effect; for, whilst on the one hand it would be a means of instruction, it would, on the other, assist the sale of many plants, of which handsome specimens might happen to be exhibited, but which cannot take place in the present state of things, because the would-be purchaser is unable to find out, without great effort, the names of the plants he so much admires; and from the apathy of human nature, he, therefore, gives himself no further trouble respecting them.

REMARKS ON THE COMPARATIVE MERITS OF POROUS AND GLAZED FLOWER POTS.

BY W. A. R

The construction of garden pots having of late been a subject of some public interest, and opinions having been advanced, which, to say the least in their favour, have novelty on their side; it becomes a matter of importance to watch rather closely the arguments which have been advanced in their support, in order that some idea may be formed of the nature and extent of the claim which they have upon the attention of the cultivator.

As far as regards the shape and proportions which are recommended, I think them the best that can be devised, whether their usefulness or elegance be taken into consideration; but as regards the other particulars of their construction. I am inclined to believe, that however plausible the arguments may be which are brought forward in their support, there will be many obstacles to hinder their adoption. I do not think that the objection urged against porous pots, on the ground of their absorbing qualities, which would afterwards prove deleterious to plants placed in them, has much force; for supposing and allowing that in the cases cited, (see Gardener's Chronicle, page 500,) viz., that of the stinking roots of an Acacia, allowing that in this instance the effect would be injurious, it must at the same time be borne in mind, that not one in a hundred of the plants cultivated in pots impregnate those pots with any unpleasant smell; and in the case of those which are so circumstanced, if laid by for a time and exposed to the action of the weather, the objection would be entirely groundless.

The objection that the pots in common use are inelegant and unpicturesque, may have some force when they are placed in situations intended as decidedly ornamental: so far the glazed pots of Mr. Forsyth's recommendation would be preferable.

Mr. F. remarks, that "as regards nursery and forcing departments. where pots are little seen by any except workmen, the common porous flower-pot may answer," so that here is a plain admission that it is not to their use for the purposes of culture, but in an ornamental point of view, that Mr. F. objects to the use of porous pots. "For the finer ornamental plants," he continues, " whose habits require compost and treatment almost as various as the countries they come from, it is necessary that the pot should be as clean as a drinking cup, so as in no way to interfere by admixture of its properties, with the compost proper for the plant." This, although sounding very plausible to the ear, I cannot regard as having any weight as an argument, believing that if decency and cleanliness are strictly kept in practice, as they ought to be, there is nothing in the ordinary use of pots which can be absorbed so as to contaminate the soil which might afterwards be placed within them, to the injury of even the most delicate-rooted plants.

As regards the objection to placing the roots of various plants, originally inhabitants of earth, air, and water, all promiscuously in contact with burnt clay, very little of reflection will be sufficient to convince any one that the same remarks would apply equally to any other kind of pots, whether glazed or otherwise.

The use to which glazed pots seem most applicable by the nature of their composition, is that of the cultivation of aquatics, and bog or marsh plants; the effectual prevention of evaporation through their sides and bottom, would, in all probability, render them well adapted for these kind of plants, and in this respect, the use of crockage as drainage, might also, in all probability, be readily dispensed with.

One objection to glazed pots, in the culture of many kinds of plants, even if there were no other with which to oppose them, is the smoothness of their inner surface; any one who has paid attention to the rooting of plants in pots, must be aware that many kinds delight to root amongst the broken crockage: and about any irregularity of surface in the pot, this would appear to have some assimilation with the fissures of rocks, in which it is known that some kinds delight to root: and if this be the case, the smooth glazed pots, and the absence of all crockage as recommended, might render them still less valuable.

The great objection, however, to glazed pots, is the simple fact that they are not porous, and this brings me to notice briefly the advantage of those in common use over those recommended by Mr. Forsyth: the air is composed of certain gases, which are taken up by, and are the food of plants; these gases are absorbed in various forms, both by the roots and leaves of plants; and, therefore, it is that in a certain degree, atmospheric air is as necessary to the

spongioles as it is to the foliage of the vegetable race; hence the deep burying of the roots of trees, which is found to be injurious, and is accordingly deprecated, and hence it is also that in the culture of those trees in which horticultural science is more immediately concerned, we find shallow borders now recommended, and the roots to be disposed in such a position as to be near the surface of the soil: the reason of this is, that the air may penetrate the soil sufficiently to reach the spongioles, so as to be taken up by them as food. In the culture of plants in pots, the porosity of the sides of the latter will permit the atmospheric air, composed of vital gasses, to penetrate through into the soil, and thus the healthiest roots are always found in contact with the pot; but in the case of glazed pots, this percolation could not take place, and the surface of the soil alone would be exposed in any degree to the action of the atmosphere; consequently the plants would be deprived of a great portion of their nourishment. This would not be a matter of importance, provided that the roots could extend themselves horizontally to their full extent, as in that case a sufficiency of air would penetrate through the soil; but it must be recollected that the roots of plants in pots are not so circumstanced, but being checked by coming in contact with the pot, they are obliged to descend, and, therefore, the whole surface of the pot becomes to them an equivalent to the surface soil. enjoyed by an unconfined plant. Were it possible to combine in a garden pot the transmission of air through its sides, and yet to check the too rapid evaporation which sometimes takes place, such a combination would be the ne plus ultra of pot manufacturing.

September 1st, 1841.

REMARKS ON THE INTRODUCTION OF CLIMBING PLANTS IN FLOWER GARDENS.

BY M. R.

Amongst the many improvements which have been introduced into the style of flower gardening, it is somewhat surprising that the effect produced by ornamental climbing plants should be lost sight of, more especially as those instances in which they have been employed, must afford convincing proofs of the superior effect attendant on their introduction amongst the other ornamental objects of a flower garden. Whatever beauty and interest a spot devoted to the culture of the loveliest of Flora's gems, and to the display of the most refined taste and skill, may be found to possess, it will become heightened in a tenfold degree by the judicious arrangement of a few climbing plants; and in proportion to the amount of taste and

 Pelargonium, Rising Sun.





ingenuity brought into action in their disposal, will depend the beauty and attractiveness of the whole, of which they are to form conspicuous parts.

As regards the forms in which they may be trained and disposed, a considerable variety will be found to exist. Thus, if they are planted and intended to form detached objects, support may be afforded them in the shape of wood or wire trellis work of any form which may suggest itself to the idea, or which may be found most suitable to the kind of plant for which it is intended; it, on the other hand, it may become necessary to plant them in the form of a continuous line, to serve either as a screen, or a back ground to some delectable spot, the same choice of trellis work will be found to exist: and in the arrangement of the plants, the taste of the cultivator will be called into active exercise, in order to determine whether planting in a miscellaneous manner, or so as to produce an extensive surface of the various colours, would be most suitable to the surrounding and adjacent objects.

Another situation very suitable for a majority of climbing plants, is to cover masses of root work thrown together in order to give an air of rusticity to certain parts of a pleasure ground; over these the creeping plants "love to ramble," and when studded with their blossoms, they form objects of no mean attraction.

The following plants will be found adapted for the uses above referred:—Tropwolum canariensis, pentaphyllum, atrosanguinea, tuberosum, and Shillingii; Cobwa scandens; Calampelis scabra; Maurandya, Barclayana, lucida, antirrhiniflora, and semperflorens; Loasa aurantiaca; Lophospermum scandens, and erubescens; Convolvulus in variety; Sweet peas; Lathyrus azureus; Thunbergias; and if intended in any spot to be rendered permanent, some of the kind of Clematis and Climbing Roses, may be introduced.

September 10, 1841.

REFERENCE TO PLATE LXVI.

PELARGONIUM, Gains's Ris ing Sun.

NAT. ORD. GERANIACEÆ. CLASS MONADELPHIA HEPTANDRIA.

Many new and elegant varieties of Pelargonium have this season been brought before the public; and we hesitate not to say that that now represented is not inferior to any of them, whether that decision be considered with reference to the form or colour of the flower, or the general habit of the plant. Its substance and rotundity are sufficient to secure for it the good opinion of the public, as regards these essential points; while its profusion of blossoms form no mean auxiliary recommendation. Of its colour, no drawing can convey an accurate representation of its brilliancy, and richness; and we shall, perhaps, best convey to our

readers an idea of its beauty, by describing it as a light vermillion velvety red, softened to a pinkish white about the eye, and throwing its trusses of bloom from amongst a mass of deep green foliage. It is a recent seedling variety, and is supposed to have been originated between the King and Lady Carlisle; of the character of the former of which it partakes largely in its habit and foliage, and in that of the latter in its profusion of bloom; whilst its colouring is somewhat intermediate between both. No name could better convey an idea of its brilliancy than the one which has been adopted.

Mr. Gains is at present its sole possessor.

RHODODENDRON ARBOREUM ALBUM, var. PRINCESS ROYAL, White Tree Rhododendron, Mr. Gains's variety.

NAT. ORD. ERICACEE. CLASS DECANDRIA MONOGYNIA.

This very delicate and beautiful variety was originated from seed in 1835, by Mr. Gains, of Battersea. It was produced by the intermixture of R. arboreum album and R. Smithii, but it appears to bear the greatest resemblance to the former, both in habit and also in the colour of its flowers. Whether it will prove hardy or not has not been ascertained, the plant having hitherto been kept in a pot, in consequence of its peculiar dwarfness and compactness of growth; but as several of its fellow seedlings have been planted out since their infancy, and have stood with impunity, it is assumed that the present subject is not inferior to them in this important particular. It bloomed for the first time in May and June, 1841, at which time our figure of it was taken; the flowers on their first expansion are pale creamy white, tinged around the margin with a delicate blush; but afterwards they become of a pure white ground colour, exhibiting their numerous and delicate markings of rich carmine on the middle lobe of the corolla. The flowers as represented in our plate may be thought deficient in size, but this may readily be accounted for by the small size of the plant, it being only about one foot in height, and in that state produced four heads of bloom. Its slowness of growth and the dwarf compactness of its habit, appear to afford a characteristic mark of the variety. It has hitherto not been increased beyond the parent plant; and from the small size of this, added to its weakly and delicate constitution, it is probable that some time may elapse before it will become plentiful.

The plant having bloomed so shortly after the birth of the Princess Royal, appears to have suggested the appellation chosen as its distinguishing mark.

NOTICES OF NEW PLANTS.

ERICA JACKSONII, Mr. Jackson's Heath.

Par. Mag.

NAT, ORD. ERICACE E. CLASS OCTANDRIA MONOGYNIA.

A very handsome hybrid Heath, originated by Mr. Jackson, of Kingston. It was raised between E. Irbyana and E. retorta; and combines the elegant growth of the latter, with the splendid blossoms of the former; these are pleasingly disposed, and are covered with that glutinous varnish which contributes greatly to increase the beauty of many members of this lovely family. We quote the following remarks by Mr. Paxton, appended to the description of the plant in question: "The practice of hybridising heaths, though generally productive of advantage, when judiciously applied, should never be attempted except for the purpose of combining the elegant, bushy, or otherwise ornamental habit of one

species, with the beautiful or splendid flowers of another. Its legitimate object is to improve the character of certain admired kinds, by associating the features in which they are superior, with those in which they are deficient, but which may be possessed by other sorts; and not seek the intermixture of species far removed from each other, merely for the sake of variety."

This plant was noticed in a previous number as B. ledifolia, under which name it had been figured by Mr. Paxton, but which appears to be an error, by the following remark of Dr. Lindley:—"It is current in the nurseries under the erroneous name of B. ledifolia, and has been so figured by Mr. Paxton. How the mistake originated I cannot imagine, for it has no resemblance to the true B. ledifolia, an old greenhouse shrub with simple leaves, figured years ago in Ventenat's plants of Malmaison, under the name of Lasiopetalum ledifolium. That it is the B. triphylla of Siber's collections there is no doubt; but I am uncertain whether it is a variety or not. It differs from the wild plant now before me, in having much broader leaves; but that circumstance may be owing to cultivation, and not to any real constitutional difference. It may be regarded as one of the best of the Boronias, on account of its good foliage and the deep rich ruby red of its numerous starry flowers.

ÆSCHYNANTHUS GRANDIFLORUS, Large flowered Blushwort. | Bot. Reg.
NAT. ORD. CYRTANDRACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

A most beautiful stove plant, and one of easy cultivation, requiring only to be tied to a log of wood and suspended in a damp stove; it will there put forth abundance of ivy-like roots, cling to the log, and, in the short space of a few months, convert itself into a pendulous bush, every one of whose branches is terminated by a cluster of deep scarlet flowers. After flowering, the plants should be encouraged to complete their growth for the next season, and then be gradually brought to a state of rest, by the gradual diminution of its supply of water; it is not, however, requisite, but rather injurious, to remove it into a decreased temperature.

"The plant here figured is certainly the Æschynanthus parasiticus of Wallich; and consequently it is in all probability the Incarvillea parasitica of
Roxburgh; there is, therefore, no other ground for admitting the name of
Æ. grandiforus, now current in the gardens, than that all the genus are
parasitical (that is epiphytal) and, therefore, no one species should be so
denominated. Certainly, the first name should have been retained; but it
would now produce more confusion to go back to it, than to acquiesce in the
modern innovation."

PLACEA ORNATA, Gay-flowered Placea.

Bot. Reg.

NAT. ORD. AMARYLLIDACE &. CLASS HEXANDRIA MONOGYNIA.

An ornamental Chilian bulbous plant, with flowers externally snow white, but streaked on the inside with vermillion lines, and has the general aspect of a small species of Amaryllis. The plant appears to be but little known to botanists, but the genus is considered to be most nearly allied to Eucrosia.

CLIANTHUS CARNEUS, Flesh-coloured Glory Pea.

Bot. Reg.

NAT. ORD. LEGUMINACE E. CLASS DIADELPHIA DECANDRIA.

This plant was originally described by Endlicher, under the name of Stre-

blorhiza speciosa, but on its flowering it was found to be identical with the genus Clianthus. It appears to be an elegant plant, well worth cultivation as a climber. It flowers well in a cold conservatory, has good evergreen leaves, and requires a rather strong rich loamy soil, and plenty of room. It is a native of Norfolk Island.

DENDROBIUM DISCOLOR, Dull-coloured Dendrobium.

Bot. Reg.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

A singular species, with stont erect stems four feet in height, swollen in the middle, and bearing terminal racemes of dingy yellowish brown flowers, curled and waved as those of a Gloriosa. A native of Java, introduced in 1838 by Messrs. Loddiges; it belongs to the genus Onychium of Dr. Blume.

ODONTOGLOSSUM PULCHELLUM, Pretty Tooth-tongue.

[Bot. Reg.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

A pretty epiphyte, a native of Guatamela, producing white flowers, with a protuberance at the base of the lip of a deep yellow, spotted with crimson; like many other Mexican orchideæ this plant is much injured by over excitement, caused by the application of a high temperature and moisture, at those seasons when it ought to be kept cool and dry.

ROSA DEVONIENSIS, Devonshire Rose.

Paxton's Mag.

NAT. ORD. ROSACEÆ. CLASS ICOSANDRIA POLYGYNIA.

This very beautiful variety of rose has been raised by Lucombe, Pince, and Conurserymen, of Exeter, and has been exhibited by them at the London Horticultural and other principal shows. The habit of the plant is vigorous, with dark thick foliage, and producing a profusion of flowers throughout the spring, summer, and autumn months; the flowers are very large, cupped, of a firm camella-like texture, very double and deliciously fragrant. The colour on the first opening of the bud is creamy buff, changing as the flowers expand to a primrose yellow, with a pinkish buff centre. It is a hybrid, produced from seeds of the yellow china rose, accidentally fertilized by the pollen of some unknown kind, and deserves the most extended cultivation.

SCHIZANTHUS EVANSIANUS, Mr. Evans' Schizanthus. | Paxton's Mag.

NAT. ORD. SCHROPHULARACEÆ. CLASS DIANDRIA MONOGYNIA.

A variety of S. pinnatus, said to perpetuate itself without variation from seeds, and, therefore, deemed worthy of the distinctive appellation which has been given it. It is a beautiful variety, the centre of the flowers being white, with a yellow blotch on the middle lobe of the upper petal, the margins being of a light pinkish crimson. It was raised in 1839, by Mr. Evans, gardener to Mrs. Batty, of New Hall, near Salisbury.

CHOROZEMA DICKSONII, Mr. Dickson's Chorozema. [Paxton's Mag.

NAT. ORD. LEGUMINACEÆ. CLASS DECANDRIA MONOGYNIA.

Of this very ornamental genus, there are many beautiful species, some possessing a vigorous and luxuriant growth and others "prone to ramble;" but all producing flowers in abundance, and of great beauty. The present highly elegant species, has, when properly grown, flowers fully equal to those of C. ovata; it suffers much from neglect, and is often met with in a rambling unormamental condition: when properly managed, however, it displays a denseness of branches and foliage equal to any. The following line of treatment has been adopted in those places

where it has succeeded best. "Cuttings are selected for propagation from such specimens as have flowered liberally, and are struck in the ordinary way, potting them into the smallest pots when they have formed roots. The compost should be nearly two thirds fibrous unsifted heath mould, and the rest saudy loam. In re-potting them when they require it, a very small shift will suffice, and they ought never to be placed in too large a pot, nor the roots be bnried deeply, or it will become difficult to keep them from injury by superfluous water. As soon as the main shoot is three inches high, cut out the top of it, and it will branch in all directions; repeat this operation, and a dwarf bushy plant will be produced, flowering freely, and bearing richer blooms than any straggling specimen.

DAPHNE JAPONICA, Japan Daphne.

Paxton's Mag.

NAT. ORD. THYMELACEÆ. CLASS OCTANDRIA MONOGYNIA.

This plant, as the uame implies, is a native of Japan, and it is therefore not improbable that it will be found hardy in our own climate, or at least to require but a very small amount of protection after it once becomes established. It was collected by Dr. Siebold, and sent to the Continental Gardens, from whence it has been received by Messrs. Young, of Epsom. Its foliage is marked by a broad yellow margin, and the blooms have a perfume, similar to a refined essence of that of the leaves of Aloysia citriodora. Its nearest affinity is with D. odora, from which it may be properly said to differ in the band of yellow around its foliage. Its cultivation is similar to that of the other species of the genus.

SIDA BEDFORDIANA, Duke of Bedford's Sida.

Bot. Mag.

NAT. ORD. MALVACER. CLASS MONADELPHIA POLYANDRIA.

(Synonyme, Abutilon Bedfordiana.)

A native of the Organ Mountains of Brazil, where it was discovered by Mr. Gardner, in 1837, and by him sent amongst others to the late Duke of Bedford, in whose collection at Woburu it produced its large and beautiful flowers, in November, 1840. It is a small tree, growing about fifteen feet in height, and its flowers are of a deep yellow, richly veined with crimson. It belongs to the group, or genus Abutilou, as it is now almost universally considered. The name of the species is commemorative of that of the present possessors of Woburn, by whom the collection of plants is maintained with undiminished splendour.

MARIANTHUS CÆRULEO-PUNCTATUS, Blue spotted Marianthus.

[Bot. Mag.

NAT. ORD. PITTOSPORE E. -CLASS PENTANDRIA MONOGYNIA.

A very interesting twining plant, with the aspect of a Billardiera, producing large clusters of blue flowers. It bloomed for the first time in Britain in the nursery of Mr. Cunningham, of Comely Bank, in March, 1841; it has also bloomed in the Edinburgh Botanic Garden. Both of these plants were obtained from Mr. Low, who raised it in 1839 from seeds collected by Mr. Wm. Morrison, of the Swan River Settlement, and marked "Sollya or Billardiera sp. from the Darling range of Mountains."

HYPOCALYPTUS OBCORDATUS, Obcordate Hypocalytus.

Bot. Mag.

NAT. ORD. LEGUMINACEÆ. CLASS DIADELPHIA DECANDRIA.

An erect growing Cape plant, resembling a Crotolaria, introduced by Masson. in 1790. It bears terminal clusters of reddish purple flowers.

BOSSIÆA TENUICAULIS, Slender stemmed Bossiaa.

Bot. Mag

NAT. ORD. LEGUMINACEA. CLASS DIADELPHIA DECANDRIA.

A very pretty species, raised in the Botanic Garden, Edinburgh, from Vau Dieman's Land seeds; sent by Mr. Cooper, gardener, at Wentworth, in April, 1836. It produced its rich and lively yellow blossoms for the first time in March 1840. It succeeds well in a greenhouse, and appears to flower abundantly.

OXALIS LASIANDRA, Downy-stamened Woodsorrel.

Bot. Mag.

A native of Mexico, probably of the Table land; it is a large strong growing species, with large dark green digitate leaves, and crimson flowers, which are developed in succession. At the Botanic Garden, Berlin, it is used as an edging to the walks, and there grows about nine inches high; in the Botanic Garden, Edinburgh, where it was received from Berlin, it was kept in a greenhouse.

PLEUROTHALLIS PICTA, Painted Pleurothallis.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONOGYNIA.

A pretty Mexican epiphyte, introduced by Mr. Parkinson, to the collection at Woburn. It produces a stem four or five inches high, terminated by a solitary leaf, six to eight inches long, from the base of which arises the spike of curious looking flowers; the ground colour of which is purplish cream colour.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

PHACELIA FIMBRIATA.

A pretty new hardy annual, a native of various parts of North America; with the habit of Nemophila atomaria; but it is prettier, on account of a curious glandular fringe that borders the corolla, which is lilac when first expanded, and changes to white. It is cultivated under the name of Cosmanthus fimbriatua.

ARGYREIA FESTIVA.

A large shrubby stove climber, with shining ovate leaves, clothed with fine brown silky hair on the under side, and pure white flowers, divided into five sharp rays; they do not appear likely to be very showy, since they are small for a convolvulaceous plant, and in the specimen which flowered at Sion, formed small cymes, but little branched. A native of China.

LINDENIA RIVALIS.

Under this name Mr. Bentham has proposed a new genus of Cinchonaceous plants, resembling Tocoyena in the form of the flower, but corresponding with Augusta and Portlandia, in the nature of its fruit. It forms a beautiful baw, with flowers as long as those of Oxyanthus. It was found near Vera Paz, by Mr. Hartweg, who sent home seeds, which have not as yet produced plants.

GODETIA ALBESCENS.

A hardy annual from Columbia, with pale lilac flowers, without any spot. GODETIA GRANDIFLORA.

A hardy annual, also from Columbia. It has larger flowers than any other in cultivation; but is wanting in the deep red blotches which renders G. Lindleyana so attractive.

RIGIDELLA IMMACULATA.

A curious little bulb from Guatemala, where it was found by Mr. Hartweg.

TIGRIDIA VIOLACEA.

A pretty bulbous plant, with rich purple flowers, almost the colour of those of Sisyrinchium grandiflorum. It is a native of Mexico, and requires the same treatment as T. pavonia.

OLINIA ACUMINATA.

A greenhouse shrub, with narrow lanceolate leaves, pale green flowers, and dull red berries. A native of the Cape of Good Hope; not at all handsome-

OLINIA CYMOSA.

A greenhouse bush, with obovate obtuse leaves, small axillary clusters of whitish flowers, and dull reddish green fruit. A native of the Cape, and of but little interest:

HIGGINSIA MEXICANA.

A greenhouse shrub, with ovate, lanceolate leaves, and small cymes of axillary yellow flowers. It was raised in the Berlin Garden, from seeds which aprang up in the earth in which Mexican plants had been imported.

SCUTTELARIA SPLENDENS.

A handsome perennial, with cordate, crenated, rugose leaves, covered with hairs, and producing terminal racemes of tubular, slender flowers, an inch long, in colour resembling those of Gardoquia Hockerii. Its native country is Mexico, and it is probably a hardy greenhouse plant.

BÆCKEA CAMPHOROSMÆ.

A pretty greenhouse shrub, from Swan river, with heath-like leaves, and light pink cup-shaped flowers, arranged along the sides of the naked drooping branches. It receives its name on account of its resemblance to the European genus Camphorwort (Camphorosma.)

MAXILLARIA BARBATA.

Appears to be identical with M. vitellina.

MAXILLARIA PURPURASCENS.

This species is very different in habit from the preceding. It was introduced from Brazil by W. Fry, Esq. in 1840, for the Birmingham Horticultural Society.

PROTEA LONGIFLORA.

A Cape greenhouse shrub, found by Zeyher, in South Africa.

POGONIA PLICATA.

A little terrestrial orchideous plant, with dull olive green flowers, and a pale lilac labellum; the leaves, which are independent of the flowers, are plaited dull purplish brown, and covered with soft bristles. It was found in soil from the Mauritius, and has bloomed at Sion.

PLEUROTHALLIS BREVIFLORA.

A native of Mexico, and imported by the Messrs. Loddiges, very near P. aphthosa, with which it agrees in the colour of its flowers; the present species has, however, shorter, broader, and more hairy flowers, destitute of the tubercles inside the sepals; labellum, obovate angular; leaves obovate, and stained with purple.

EPIDENDRUM PTEROCARPUM.

A singular Mexican species, having a long thin raceme of pinkish yellow flowers, and a heart-shaped lip streaked with crimson.

EPIDENDRUM ARTICULATUM.

In the way of E. pastoris.

MISCELLANIES.

We have lately witnessed a most singular fact, having the greatest interest in vegetable physiology. In the garden of John Radford, Esq., of Winchmore Hill, near London, there stands a bay tree which appeared to be killed by the frost of last winter, and the whole of whose leaves became brown and apparently Of the latter many fell off as Spring advanced, and the branches gradually acquired new leaves. In this there was nothing at all remarkable; but the singular fact is, that the leaves, hard, brown, dry, and, to all appearance, dead-have gradually recovered their green colour, and are in some cases completely restored to life. The green colour makes its appearance at the base of the leaf in the first instance, and spreads upwards along, and right and left of the midrib. There can be no mistake about this circumstance, for so very strange a phenomenon naturally attracted attention; and we learn from Mr. Radford, that he has distinguished the dead looking leaves with notches and other marks, in order to be quite sure that it is they which are restored to life. A leaf now before us, marked as dead a week ago, has now the green colour spreading along it, in the manner we have described, to the length of rather more than an inch. If any of our readers have ever seen a similar case, we should be greatly obliged for an account of it. That the Sweet Bay Tree should never be cut down after it appears to be killed with frost, is well known; but that its perfectly dead leaves should be capable of reviving in this extraordinary manner, is to us an event without a parallel in either the animal or vegetable kingdom. - Gard.

At Mr. Gains's, of Battersea, we observed a few days ago a very distinct and desirable Verbena, which had been received from Buenos Ayres. The colour of its flowers were a beautiful light rich vermillion, with a paler centre, and owing to their large size they were very attractive, so much so that we regard it as one of the best: more especially as its colour does not suffer from atmospheric causes, in a manner similar to the greater part of the brilliant scarlet and crimson kinds. The habit of the plant is somewhat similar to that of a vigorous plant of V. melindres, though the foliage is somewhat more rigid. It will be figured in this work shortly.

At the South London Horticultural Exhibition, we observed a plant of an hybrid Fuchsia called Curtisii; it is remarkable for its large inflated corolla, which is of a deep rose puce colour, the sepals being vermillion; we also noticed a plant of F. Youellii, in fine bloom. This is a very desirable kind, from its habit of producing blooms abundantly, and also for its delicate and subdued tinge of colouring.

The genus Rhodorhiza (proposed by Mr. Webb to be separated from Convolvulus) forms a small group remarkable for its habit, the types of which are Convolvulus floridus and Scoparius, and to these may be added R. glandulosa. new sp. The roots of both the original species are fragrant, and yield the so called oil of Rhodium, by simple distillation; though the first does so in a less degree, or sometimes, when young, scarcely any. The original Lignum rhodium, which came from Macedonia, was certainly Linnæus's Rhodiola roses, figured as such by Parkinson in his Theatrum Botanicum. "It grows, he says, in the very raggiest places on the mountaines of Pangle and Ingleborough." Soon after the discovery of the Canaries, this name was transferred to Convolvulus scoparius, and afterwards to several American plants. It is called in the Islands Lena Noel, a corruption of Lignum aloes, and though now in little request, large quantities of it were formerly exported, and the plant nearly extirpated. The apothecaries in Europe sold it both as Lignum rhodium, and as the Aspalathus of Dioscorides. It soon, however, lost this latter name, which was handed over to a wood brought from India, though the original Aspalathus was a thorny leguminous shrub, growing on the shores of the Mediterranean, probably Spartium villosum, according to Sibthorpe.-Bot. Reg.

FUCHSIA RADICANS.—This new species, found in Brazil, by Mr. Miers, has flowered in several collections. In the Birmingham Botanic Garden, the original tree, received from Mr. Miers, now eight or nine feet long, has shown no flowers; yet, of three plants of it, each about two feet high, one is in flower, and the other two in bud. Our readers will be glad to know this, and that the Brazilian species is likely to flower at nearly as small a size as other sorts of fuchsia, now that it has been brought to a flowering state. We hear from Mr. Cameron that it succeeds better in a greenhouse than in the stove, which appears too hot for it.—Gard. Chron.

Amongst the plants exhibited from the garden of the Horticultural Society, at the rooms, in Regent-street, London, were two beautiful and novel importations from Guatamala, Achimenes longiflora and A. rosea, nearly related to the well-known Cyrilla pulchella. The former has large violet flowers, nearly two inches across, and the latter pretty deep coloured blossoms. They are both of easy cultivation, and will form valuable additions to our collections. There is a pure white variety of A. longiflora.

Common hard water from wells contains calcareous matter, dissolved by an excess of carbonic acid. By exposure to air some of this acid escapes, carbonate of lime (chalk) is deposited, and the water is improved; but for the purposes of horticulture, nothing can be compared to the water derived from rain which flows through pastures into a pond that has a clay bottom. It is soft, replete with every soluble matter adapted to the nourishment of plants, and far preferable to any that can be obtained from artificial, confined depositaries. Possessing a natural fluid of so excellent a quality, the gardener will have no occasion to trouble himself with manure water, or any other offensive application, the results of which, to say the best of them, are even doubtful, and certainly at times, very pernicious.—Paxton.

PRIZE ESSAY.—THE SOILS OF EAST SUFFOLK.—We have already noticed this pamphlet, and take this opportunity of again reverting to it. Respecting mildew, we have the following remarks:—"Where soils are composed of chalk,

without a due admixture of silicious matter, the epidermis, or outer coat of the straw is not so hard as it should be. On these lands, mildew is prevalent; while near the sea coast, where the marine deposit of sand forms the principal ingredient, mildew is rarely to be met with. Mildew is a parasitical plant, of diminutive growth, which has no power of growing, except by the supply of the sap from wheat straw, or other substances exuding from vegetables. The seeds of this plant are floating in the air generally in the summer time." The author does not give much credence to the opinion that it is increased or fostered by the barberry. He thinks it may find on the bark of the barberry congenial food; and in that case it may sometimes be first seen on that plant, and by arriving at maturity, supply seeds to other plants in its vicinity. But adds, "unless the predisposing cause exist in the stalk of the wheat (or other plant), the mildew could not by possibility take effect. The predisposing cause, in a great measure, is in the soil; and thus we find some districts much more liable to its attacks than others. When the soil is very deficient of silex, or not having that due mixture which enables the roots to absorb sufficient silex to form a hard epidermis, the object is to add such substances as will afford the power. I, therefore, recommend red sand, which contains exide of iron, as the best; but drift sand, road sand, the harder particles of cinder dirt, refuse from the soap boilers, barreled and sold, will be the most efficacious remedy." Gardeners will know how to improve this to their own advantage. They may turn it to good account with respect to garden crops; such, for instance, as peas and beans, especially the later crops, which mildew always injures more or less, and not unfrequently renders useless. The component substances recommended above, are within the reach of most gardeners, and we should strongly advise them to apply them wherever they can. No garden that has been any length of time in cultivation is free from this pestiferous fungus, and it is worth while for those whose garden crops are in any way affected by it, to use whatever means may appear likely to counteract its injurious effects. Speaking of the admixture of various soils, and the advantages resulting therefrom, an incident is related, showing the importance and beneficial effects arising from this practice. "I now come to the shelly deposit denominated red crage. It consists of shell, mixed with sand and gravel, showing various distortions and alterations of position, the effect of violent convulsions. This shelly deposit has many properties in common with what a mixture of sand and chalk would produce. It is barren in its own nature. and is, therefore used instead of gravel to form garden walks. It contains much oxide of iron, and was first discovered to be useful as a stimulus to soils overcharged with scur black vegetable deposits, from the following accident :- A person was carting some of this crage for a garden walk; and in conveying it over a black barren soil, the cart broke down, and scattered the contents. The driver, instead of collecting the crage, spread it over the surface where it lay. The field was after this prepared for turnips in the usual way, and much to the surprise of the occupier, there was a good crop of full-sized turnips where the crage had been cast, while the rest of the field afforded only a miserable crop, of stunted growth." As we have already stated, this pamphlet was prepared for an Agricultural Society; but this part of the subject, at least, is applicable to gardening, and we think more especially so than to agriculture. The addition and mixture of soils for garden purposes may, in a majority of cases, be considered practicable, at least to a much greater extent than is possible over the extended surface of an ordinary farm. With respect to culture, we deem it of vital importance that common garden soils, which have for a lengthened period been subjected to unceasing culture, and the production of common garden vegetables,

the growth of which has only been secured by the application of large quantities of stimulating manures. This is a fact familiar to every kitchen gardener, nor does he require elaborate argument to convince him of the importance of renovating such soils; and we believe this possible to a much greater extent than is generally supposed. To this gardeners generally may with great justice reply. "the practice of the school in which we studied was that of incessant toil, and severe manual labour, and this blunted our zest for mental exercise, and we have not, therefore, acquired sufficient knowledge of the principles of chemistry, to guide our operations in experimenting in this department." To this we would say, a great number of experiments might be tried on a very small piece of ground; there would be failures, but some useful discovery would the result. For instance, a bed twenty yards in length, by one yard in width, might exhibit as many experiments. One yard might be trenched deep, another shallow; in another the surface soil might be turned underneath, and the other kept on the surface. One yard might be dressed with one kind, and another with a different kind of manure. To some, salt might be applied; and to others, lime, chalk, gravel sand, rubbish, road-scrapings, maiden loam, wood ashes, soot, or charcoal. All this, and infinitely more might be done, at little expense of time, and no risk of failure in the general crop.-ED.

QUERY.—Could you, or any of your readers, advise a remedy for the destruction of the black ant, which creeps over my wall-fruit trees, and is in a great measure injurious, not only to the fruit, but also to the trees. An early answer will oblige.

J. F.

As I have just built a conservatory, eighteen feet by ten, will you have the goodness to recommend such plants as would answer to grow with the heat produced by an Arnott's stove? Passion flowers being favourites, could you recommend any that would succeed? Is the crimson sufficiently hardy for such a situation? G. F. WOODMAN.

Selsey, near Chichester.

[If by the crimson passion-flower our correspondent refers to Passiflora kermisina, we should fear that he will not be successful in growing it in the situation referred to. That in which we have always seen it thriving best, was where a temperature intermediate between that of a stove and greenhouse was kent up.1—ED.

MONTHLY CALENDAR.

PLOWER GARDEN.—Remove all plants which are past blooming, or which may have become injured by frost, and take up and pot any which it may be desirable to retain for supplying cuttings in spring. Let the ground be manured and prepared for the reception of bulbous roots, as Hyacinths, Jonquils, Narcissus, Gladiolus, Iris, early Tulips, Crocus, and Snowdrops. Protect the roots of Dahlias by a covering of soil or ashes, but do not take them up, even though their tops be destroyed by frost; divide and transplant perennials, and do not neglect Auriculas, Carnations, and similar valuable plants. Sow annuals on a

warm border, or in pots, for spring; remove weeds, choosing dry weather; clip hedges, mow lawns, sweep and roll gravel walks, and lose no opportunity of rendering every thing orderly.

PLANT STOVE.—Regular but moderate waterings, the due management of fresh air, the use of slight fires at night to avoid a great declension of temperature, and the routine attention to cleanliness, are the points to be observed. Orchidea will generally be in a state of rest, and will not require the application of water, or other stimulants whilst such is the case.

GREENHOUSE.—The delicate plants must be removed under shelter without delay, and all others on the approach of frost. In arranging them pay some attention to the ornamental effect likely to be produced, and above all, do not crowd them, as the whole winter credit will depend on this; admit air freely, but gradually decrease the supplies of water, giving no more than is absolutely necessary; remove all dead leaves on their first appearance as such.

KITCHEN GARDEN.—Sow Early Frame peas and mazagan beans in a warm spot to chance their surviving the winter. Radiskes, which will be found serviceable if warm weather ensue, small salading, and carrots on a spent dung bed for early spring use. Transplant cabbages for spring; cauliflowers toward the latter end, under glasses; lettuce and endive in sheltered spots, or on elevated banks, to stand till spring; plant garlic, shallots, prick cauliflower and cabbage plants, the former into frames; towards the end of the month take up the best endive, and set them closely in the frames cleared of melons; dress asparagus beds, and plant herbs; take up early brocoli, and lay it in slanting to the north; take up roots of potatoes, carrots, beet, parsnips, salsify, onions, &c., and adopt the best local means of preserving them through the winter; hoe and stir the ground in dry weather, and destroy weeds; dig and trench all vacant ground, and protect whatever may require it.

FRUIT GARDEN.—The wall fruit will be chiefly cleared off, in which case give the trees a good washing with the engine to dislodge insects; attend to apples, pears, &c., as they ripen, and gather them carefully, placing them in the fruit room; prepare borders for wall fruit trees, and plant wherever it is required.

FORCING GARDEN.—If there is not a good heat in the tan-pits they should at once be replenished with fresh tan, and made up so as to retain a mild heat through the winter; in moving the pine plants, to effect this, be careful not to injure them. Make slight fires at night, but do not attempt anything beyond the prevention of a decrease of temperature. Admit air with caution, and water less frequently; make fires at night, and on dull days, in late vineries, to preserve the fruit from mouldiness; admit air freely when fine. By the end of the month prune and tie peaches in houses intended for early forcing: cucumbers, both in frames and houses, must not at this season be neglected, they require supplies of air, heat, and moisture, in rather delicate proportions. In Mushroom houses and sheds let beds be made up, and spawned in successional order.

PLEASURE GROUNDS — Plant hardy trees, flowering and evergreen shrubs, if the soil is not liable to become saturated in winter, leaving the planting of more delicate plants, and of such situations to be performed in spring. Prune evergreens, also deciduous trees after they shed their leaves; alterations in the direction of walks, the form and arrangement of clumps or lawns, may now be prosecuted vigorously in snitable weather.

PARKS, PLANTATIONS, &c.—Planting generally may be performed, and ground prepared for that intended to be left till spring; fell and thin trees and thickets. The draining of land may afford employment for all willing hands through the winter.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXVI.-NOVEMBER, 1841.

ON THE EDUCATION OF GARDENERS; OR, THE ADVANTAGES WHICH MAY BE DERIVED FROM LITERATURE. SCIENCE, AND GOOD CONDUCT.

BY J. H.

In every age, and in any country where the effects of a very moderate degree of civilization have been felt, rural affairs have occupied the profound study and labour of the greatest and wisest of men: indeed, the greatest and wisest of men—men who have been distinguished in peace and war, whose names have been rendered famous for their knowledge of the arts, as well as the prowess of their arms, have themselves been cultivators of gardens and farms. Since men of the most exalted rank, not only with respect to wealth, but also as regards knowledge and moral worth, have not considered gardening as unworthy of their notice, surely the young gardener of this enlightened age might have some desire to imitate the wise and great in the cultivation of the rich fields of literature and science.

The Horticultural Society of London have recommended an extended course of education for the young gardener; others consider that a gardener's education should be confined to the literature and practice of Horticulture. I have been engaged about twenty years in the practice of gardening, and have, during that time, passed through many of the vicissitudes of a gardener's life; and, without being prejudiced in favour of any party, I will endeavour to point out a system of instruction which will be useful to the young gardener, and to trace the effects of moral and intellectual education on human happiness.

A knowledge of writing, arithmetic, and the elements of mathematics should be acquired as soon as possible. As to arithmetic, I may observe, that after the student has learned the first four rules, he should then proceed to fractions, and make himself thoroughly acquainted with both vulgar and decimal fractions, for I consider

fractions the philosophy of arithmetic. He should next study mensuration, including the measurement of land, wood, and the various kinds of artificers' work. The other departments of arithmetic which I have not mentioned, may be studied any time when he has an opportunity.

Some knowledge of the Greek and Latin languages will enable the gardener to understand the terms used in botany, and will greatly facilitate his progress in the study of that delightful science. By knowing the literal signification of the botanical terms, he will recollect the names of plants with much greater ease and precision; besides, so great a portion of the English language is derived from the dead languages, that a knowledge of these tongues must be very essential in English composition, which is of the greatest importance to every young man who wishes to qualify himself for writing on any department of gardening, or for writing upon the other sciences. proof of this statement, I might cite as an example a gardener of my acquaintance, who is a good Latin scholar; I am not at liberty to mention his name, but his lucubrations have long figured in the Gardener's Magazine, and more recently in the Gazette. writings may be known by their beauty and correctness of composition, and splendour of diction; and they also bear testimony that the author possesses a thorough knowledge of the practice of gar-I cannot pass over this part of the paper without paying a tribute of respect to his talents.

Every young gardener should make himself well acquainted with the grammar of the English language. A knowledge of grammar is of great value to every person who has to correspond with gentlemen, or people of education. Supposing two gardeners were applying to any gentleman for a situation by letter, it is probable, all other circumstances being equal, that he would decide in favour of him who wrote to him the most grammatical letter; and this is, perhaps, a good way of judging, for it is not likely that he who exerted himself to acquire a knowledge of grammar, would allow himself to be ignorant of his own profession. It is also evident, that every well-educated person will have more esteem for him who writes in a grammatical manner, than for one who writes bad grammar; and it is certainly of some importance to every gardener to be able to raise himself in the estimation of his employer.

There are few to whom geography is more useful than to a gardener. He should not only know the native countries of plants, but also have a general knowledge of the climate and soil of those countries. By this he can determine what mode of culture will be best suited to the plants committed to his charge; whether they would require the stove or greenhouse; whether they would merely require

protection during the winter, or stand the open air. He will also readily decide what treatment will be best adapted to such seeds or plants as may at any time be introduced from abroad. It is important, however, that he should be careful to distinguish between a physical and a geographical climate. A plant may be a native of valleys which are under the influence of a tropical sun, and another may be a native of adjacent mountains, which are subject to all the changes of weather which modify the temperature throughout the surface of the globe. But independent of this, the pleasure afforded by a knowledge of the different beauties of this almost globular world of ours, must greatly enhance the interest of the science of geography to every intelligent mind.

Moral philosophy—the science of morals, includes the whole circle of human conduct-man's duty to himself, and his duty to his fellow creatures, in the various relations in which he may be placed. I consider this a most important study, because without this knowledge, the learning of the schools may be of little use-nay, it may even become a curse. But moral knowledge cannot be perfect in its operation, or satisfactory in its effects, unless founded on religion. Many of the misfortunes of men may be traced to their ignorance of moral and religious knowledge. It is easy for young men to conduct themselves with propriety in the place of their nativity, where they have tried friends to advise them in every difficulty; but a gardener is, perhaps, sent some hundreds of miles to take charge of a place where he is an utter stranger, and where it might be highly imprudent to tell his mind, or to ask advice of any person, as his words and actions may be noticed, and reported to his employer. Let him remember, when so placed, that the "wise man is his own counsellor;" but before he can be justly entitled to the character of a wise man, he must have acquired wisdom to direct his moral conduct, in all the various situations in which it may be placed, and he may rely that he shall be placed in some very trying situations in the course of his life. Now, what is this wisdom? Wisdom implies the possession of a certain quantum of moral and religious knowledge, with a firmness of determination to act at all times, and in all situations, in accordance with the fixed and unerring principles of religion and morality. Solomon says "that it is not good that the soul be without knowledge," by which he means moral and religious knowledge. It is also said that true wisdom cometh from above, and it is certainly right and proper to implore the guidance and direction of Heaven in all our undertakings. But the Director of the Universe has endowed us with reason, this is the talent which he intended us to cultivate, and to employ for the promotion of our interests and our happiness; and if we neglect our duty in this respect we may rely

on meeting with many misfortunes in our passage through life, and ultimately with the reprobation of Heaven.

The life of a Gardener may be said to be a trial of professional skill, a trial of temper, and a trial of moral principles. Now, the question which every young Gardener should put to himself, is, Am I qualified to stand the application of these three tests? He may pass an examination before a committee of the Horticultural Society of London-but if he cannot stand the application of the other two tests, his success and happiness, even in life, appear to me to be very uncertain. To send a young man adrift in the great ocean of human life, without fixed moral principles to direct his conduct, is like sending a ship to sea without an helm; for, without this knowledge how can he be expected to pass respectably and honourably through all the changes and vicissitudes of a Gardener's life? He may be in a first-rate situation this week, and be obliged to work as a labourer the next. Such changes are very trying to the wisest and best of men, but they are peculiarly trying to the mere scholar, who has never sought the consolation of Christian philosophy; for learning renders the feelings more refined, and, therefore, more acute, and thereby lays them open to many real and imaginary miseries, which never disturb the mind whilst clouded by the apathy of ignorance.

"Learning," says Foster, "is good in its own place; but it should not be forgotten that it is simply a collection from others laid up in the memory. Shallow draughts, the too common result of such a race after accomplishments, only intoxicate; and even when learning is pursued to a height, it is but a poor acquirement compared with wisdom. This is the calm and reguiar government of the soul, leading its possessor to observe true measures and suitable decorum, in words, in thought, and in action. Learning will civilize, and polish, and refine, but of itself cannot moralize or sweeten the temper, or abate resentment. On the contrary, by itself it sets a keener edge upon the calamities of life, and renders the man, or the woman, impatient, or peevish, if their merits are not appeciated as their vanity suggests they should be. In the whole word there is, perhaps, no man so much alive to misery, and in fact so miserable, as the profligate scholar."

It was the opinion of the late Provost Henderson, of Edinburgh, that "he is the best Gardener who keeps his place the longest." Now a man may have a thorough knowledge of the theory and practice of Gardening, and not keep his place long; but it is evident that he who possesses the qualities that I have mentioned in the greatest, perfection, that is, professional knowledge, intellectual endowments and moral principles, and can make a proper use of this combined knowledge, is the most likely person to come under Mr. Henderson's

demonstration of a good Gardener, and he has also the best chance of enjoying the greatest amount of happiness.

Intellectual education is certainly useful, but it should be remembered that moral acquirements ought to keep pace with intellectual advancement, for knowledge is power; that wisdom is requisite to direct this power; and that intellectual power may become a dangerous possession-a possession which may be destructive to happiness, without wisdom to direct it to proper purposes; but if properly directed, it will not only advance the happiness of the individual, but may tend to fit him for the society of a higher order of intelligence in a future state of existence, for I trust "that each treasure of knowledge we attain, shall be carried through illimitable being. So vast is the mind of man, so various its faculties, so measureless the range of observation to feed and to elicit his powers, that if we had lived from the birth of the world till now, we could not have compassed a millionth part of that which our capabilities, if trained to the utmost, would enable us to grasp. It requires an eternity to develope all the elements of the soul."

In conclusion, I may enquire how those young Gardeners who have not acquired a taste for useful studies, are employed after the necessary labours of the day are finished; some (though I am happy to say not many,) are to be found in the ale-house, but a great number waste their time in forming acquaintance with people whose knowledge or influence can be of no service to them as regards their advancement in life: and not only so, but many in this manner form connexions which not only retard, but frequently prevent their future promotion. The mind evidently requires some excitement. studious will find this excitement in the pleasing pursuit of science; but he who neglects the cultivation of his moral and intellectual qualities, and by that means allows his passions to gain the ascendancy, may seek for this excitement in the intoxicating draught, or, perhaps, in the indulgence of more vicious pleasures; or if he has as much wisdom as will enable him to avoid the paths of vice, he perhaps forms an early and imprudent connexion in marriage. There is not a nurseryman of any note in the United Kingdom that cannot give examples of men whom ignorance has consigned to oblivion; of men who have danced away their lives to endless misery and remorse by inebriation; and of men whose hopes have been blasted by premature marriage. Such are the baneful consequences which result from ignorance.

It is not to be expected that Gardeners who have no taste for study in youth, but rather have contracted bad habits, will turn their attention to scientific acquirements after the precious hours of youth have been squandered, for they are generally doomed to work during the remainder of their days at hard labour, and their leisure hours are frequently spent either in ill humour, or in vain declamations on the poverty of the profession; whereas by a different course of conduct, they might have raised themselves to preferment and honour.

ON THE CULTURE OF THE HYACINTH.

BY VIRGINUS.

The cultivation of the Hyacinth, is at the present season, doubtless an object of interest with many, especially the fair sex, who delight to tend with careful anxiety the gradually developing foliage, and opening bud of any child of their adoption. Amongst the numerous families which Flora can display before them, there is perhaps none (excepting only "the Rose") which is more really an object of interest, or one on which they bestow more attention than the Hyacinth, and its congeners; this may be perhaps because the latter are so subservient to their wishes, and so attractive and flourishing under their peculiar care; be this as it may, there are none who dare dispute the favour in which they are held by these "fairest flowers of creation."

There are two ways in which the cultivation of the Hyacinth may be carried out, namely, by planting them in pots of soil, or over glasses of water; they also admit of cultivation in the open ground, where they form exceedingly beautiful objects; the manner of cultivating them in these several ways I will now proceed briefly to describe.

For their growth in pots, the size best adapted to their use, is that known as upright forty-eights; these should, after the usual form of crocking, have about three inches of well decomposed dung put in their bottoms, on which a light soil, composed of loam and leaf mould, will be found most suitable for the growth of the subject of these remarks: after filling the pot rather loosely with the soil, the bulbs should be taken, and planted one in the centre of each, by placing it on the soil, and gently pressing until the crown of the bulb is just below the level of the rim of the pot, the soil is then adjusted and the operation of potting is completed; after potting, the pots should be removed to a north border, and plunged to the depth of six inches in coal ashes, where they may remain until they are grown about an inch, or may be wanted to be brought into flower by the application of more heat; a succession of flowers may be always kept up by taking a few plants in at one time, and submitting them to an higher temperature, repeating the operation at intervals, as the supply may

be required. Those planted in glasses require to have the water frequently changed, and to be kept in a dark situation till they begin growing.

Abundance of light and water are required by them when progressing, and it is necessary to tie up the flowering stem carefully on its attaining a few inches in height: when past blooming, and the foliage matured, water should be gradually withheld, and the bulbs ripened off; they will do well for planting in the flower garden the following season.

For their culture in the open ground, a bed should be provided in a sheltered situation, and the soil rendered rich, and light, previous to planting them, which may be done at any time from October till December; the most usual time is, however, the end of October, or beginning of November. They should be set about two inches below the surface, and will require but little care after planting, except the eradication of weeds; they may be protected from severe frosts, or heavy rains, by a covering of mats on hoops, for which trouble their blooms will amply repay: it will be necessary to tie them up before they are in bloom, or the weight of the blossoms will cause them to prostrate themselves on the soil.

After blooming is over, the roots may be taken up and thoroughly dried, and placed in an airy loft, or store house, until wanted the succeeding autumn.

OBSERVATIONS ON THE MANAGEMENT OF THE FRUIT ROOM.

BY T. M.

At the present season of the year there is, perhaps, no subject to which we can advert with so reasonable a hope of being of service to our readers, as that of the winter storing, and management of fruit; the skill and talent of the gardener, or cultivator may be carried to the highest pitch in the management, or cultivation of fruit trees, so as to produce and mature the most surprising crops, year after year, and yet, if proper attention be not paid to them, both in the act of gathering from the trees, and in their subsequent management, the skill and talent displayed in assisting nature to mature her produce, will have been but uselessly expended, and both the dessert table and the culinary department of a gentleman's establishment will have elsewhere to seek a supply at the very time, when most of all others, the gardener ought to be able to produce in the mind of his employer, a favourable impression of his abilities.

The first point to which more than ordinary importance may be attached, consists in gathering the fruit exactly at the time when it

has arrived at a fit and proper condition; this remark applies more particularly to those kinds which ripen in early autumn, and do not keep more than, perhaps, two or three months; those kinds which keep till a later period, requiring in most seasons to hang on the trees as long as the weather will permit them, and even then, it is sometimes, from the cause just named, found necessary to remove them before they are fully matured. But to return to those whose period of maturation admits of their remaining on the trees till they are perfectly ripened; I have said that the operation of gathering should be performed just at the time they have attained a fit state, and this can only be determined by careful and frequent examinations; the too frequent practice of waiting until the fruit begins to drop, cannot be too severely reprobated, and it is equally bad to gather before it becomes properly matured: in the former case, the fruit is apt to lose the finest part of its flavour, and never keeps in eating so long as it would otherwise do, and in the latter, owing to the imperfect elaboration of its juices, a due portion of saccharine is not secreted in the fruit, and consequently it never attains its proper flavour. The time at which it should be gathered is just when the pips are becoming brown, and this can readily be ascertained by taking a fruit, at intervals, and cutting it through; the sacifice of a few fruit in this way is of much less importance than allowing them to hang till they commence dropping, for when such is the case, a single stormy night would have the effect of unloading the tree of perhaps half its crop.

The next important step is to choose a fine and dry day for gathering, it being not only desirable, but necessary, that the fruit when conveyed to the fruit room should be quite free from any external moisture. In gathering the fruit, each should be taken by the hand, and gently lifted upwards, the stalk will then readily separate from the branch, without breaking away the buds which are always situated near the footstalk of each fruit, and which are those that produce blossoms the next year. The circumstance that trees after producing large crops, very frequently bear none or but few the following season, is occasioned as much by the careless manner of pluckingby which these buds are broken off, as it is from exhaustion by reason of the excessive crop: on gathering, the fruit should be carefully laid in baskets without bruising, and conveyed either to the shelves of the fruit room, or what is much better to an attached room, where they should be laid in heaps for about a fortnight in order to go through the process of sweating, after which they should be wiped gently with a cloth and then conveyed to the shelves of the fruit room, and laid in single layers, with the eye downwards. It will be hardly necessary to remark that this amount of care need only be

bestowed on valuable dessert fruits, for which reason all small or imperfectly matured fruit should be picked out when gathered, and not only should each kind be kept distinct from all others, but it is even desirable to keep the produce of one tree separated from that of another of a similar kind, more especially if there happen to be both wall trees and standards.

With those kinds which do not attain their perfect maturity on the trees in this country, on account of the coldness of our autumn months; some more care is requisite in determining when to gather them, it being desirable that they should remain on the trees as long as possible, and yet not sufficiently so to be liable to suffer injury from frost. The same care is necessary in gathering them without injury, and also in selecting only those specimens which are fully formed, and rejecting the small, and imperfectly formed ones; the very latest kinds should also be packed up in jars, or boxes, so as to more perfectly exclude them from atmospheric influences, at the same time the materials with which they are surrounded ought to be perfectly dry, and of such a nature as neither to imbibe dampness nor communicate any unpleasant taste or smell; when thus packed, the fruit may be stored away in any part of the room until wanted for use, when it should be brought out seriatim, and placed for a day or two on the shelves of the room, and then be submitted for a short time to a somewhat higher temperature. The impossibility of carrying out this treatment in the case of all culinary fruit will be apparent; these should, however, be gathered and removed as carefully as possible, and after having been submitted to the process of sweating, they should be thinly spread on the shelves assigned them.

The management of fruit does not, however, consist merely in storing it away to the best advantage; frequent and careful examination is also necessary to remove all such as may be advancing to a state of decay, and this should be done timely, before they spread contamination around them; these should at once be removed quite away, and all litter, or anything calculated to produce damp or mouldiness, should be assiduously removed, so that the fruit room at all times may present an appearance of cleanliness equal to that of a living room.

In the case of the finer winter pears, a separate apartment is necessary, in order to bring them fully to maturity; that in which they may have been kept should have a uniformly low temperature, and the atmosphere should be submitted to but few changes; but when they are wanted for use it will be found advantageous to submit them to an increase of temperature, on an average about 60 degrees will be found sufficient, and this will have the effect of removing the grittiness of some otherwise excellent kinds, whilst with all it will

VOL. VI.

have the effect of considerably heightening their flavour; but few, however, should be submitted at once to this treatment, as they require to be used within a few days afterwards.

We had intended to have offered a few remarks on the principles which should be kept in view in the formation of a fruit room, but find that we must defer that part of the subject until a future opportunity.

REMARKS ON THE CALCEOLARIA, WITH A DESCRIPTIVE LIST.

BY T. M.

Next to the Geranium, perhaps the Calceolaria may be regarded as the most popular flower of the present day. Like that, it has passed through many stages of improvement since the fostering hand of scientific industry has been extended towards it; the causes by which this attention and care may have been called forth, are, perhaps, the beauty which is possessed by its blossoms, the ease with which it is cultivated, or the numerous and almost endless variety into which its progeny sports. As regards the first recommendation there are certainly few subjects that can boast of a greater share of beauty than is displayed by a well grown plant of some of the fine varieties now in cultivation; whilst as regards the task of growing it, there is certainly no plant which thrives more vigorously when the elements and constituents of vegetable life are duly supplied, upon which subject we may probably have a few remarks to offer ere long. The endless variety too which abounds amongst its progeny, is, perhaps, only equalled in the case of the Dahlia, whilst it possesses this decided advantage over the latter, that whilst from a batch of seedling Dahlias, the chances may be that not one is worth cultivation, amongst a similar quantity of Calceolarias, nearly all may possess novelty enough to render them worth cultivating, whilst a considerable number in all probability will be in possession of higher qualifications.

Notwithstanding the great improvements which have been effected both in form and colour, and also size, there still remains much to be done in rendering them deserving of the title of perfect flowers; the principal disqualifications of which we have to remark, consist in the flatness of surface in those kinds which possess the necessary size and rotundity of outline; and on the other hand, in the small size of those varieties which possess a due convexity of surface. What we take to be perfection in the Calceolaria, is a perfect roundness of

outline without crenature or indentation, and a convex surface, so that on a side view, the flower may present the form of a semi-circle; a clear and rich velvety colour; if spotted, the two colours to be clear and distinct; and as regards size, the greatest that can be attained in conjunction with the qualifications just named.

The following list of the leading kinds of the day, may, perhaps, be useful to many:—

HERBACEOUS CALCEOLARIAS.

Alba maculata—White and purple.

Eximia—Rosy purple, spotted.

Elizabeth—White, spotted.

- Aurea maculata—Straw colour, spotted.

 a Sulphurea splendens—Sulphur colour, spotted.
- b Princess Royal—Cream colour, with speckled rose spot.
- b * King-Cream colour, rosy puce spot.
- b Pictum-Cream spotted.
- b Lydia-White, rose spotted, marked with dark rose.
- b Maria-Cream colour, spotted.
- b Masterpiece-Yellow, spotted.
- b Pilot-Sulphur spotted.
- Bride of Abydos—Cream colour, spotted.

 Albidum maculatum—White, spotted.
- c Queen of England-Yellow, spotted.

b Isabella—White, spotted with rose.

Shrubby Calceolarias.

- Lady of the Lake-Yellow.

 * Alstonii superba-Orange, spotted.
- a Grandis -Bronze crimson.
- a Mirabilis-Cream colour, large rosy crimson spot.
- a • Prince Albert—Yellow, beautiful rich crimson spot.
- Sultan—Fine yellow, orange crimson spot.
- a * * King-Beautiful dark crimson.
- c Louisa-Buff, dark crimson spot.

- c Ophelia-Yellow, spotted.
- c Denholmii-Scarlet crimson.

HALF SHRUBBY CALCEOLARIAS.

- Model of Perfection—Strawberry colour, spotted.
- Speciosissima—Bright crimson, yellow margin.
- a • Royal Standard—Beautiful bright crimson, slight margin.
- a * * Fire King-Fine orange crimson. a * Incomparable-Yellow, large crim-
- son spot.

 a Delight—Fine yellow, large strawberry-coloured spot, distinct.
- a * Gem-Fine orange crimson.
- a * Miss Antrobus-White, fine rich crimson spot.
- a . Magnum Bonum-Fine yellow.
- a * * Violacea superba-Violet purple, very distinct.
- a Prima Donna-White, beautiful rose crimson spot.
- a * Victory Orange, large crimson spot.
- a * Chmaz --Yellow, beautiful crimson spot, distinct.
- a * Nonesuch—Yellow, scarlet crimson spot.
- b * Eva -Rosy purple, spotted.
- c Rival King-Dark crimson.
- c Climax—Orange crimson.
- Miss Hope-(Ried's) dark crimson.

In the above List those kinds marked a were raised by Mr. Green; those marked b by Mr. Barnes; and those marked c by Mr. Denholm. The best varieties are marked throughout the list with an asterisk, thus *.

ON THE CULTURE OF THE GUAVA, (Psidium Pyriferum.)

BY X.

Observing on the cover of the last number of the Magazine, a note to one of your correspondents, respecting the Guava, I beg to hand you the following remarks on its cultivation, in the hope that they

supply some of the information required.

The White Guava, (Psidium Pyriferum,) is a West Indian tree, attaining ten or twelve feet in height; its fruit is somewhat larger than a hen's egg, with a smooth yellow rind, and firm pulp, full of seed, flesh coloured, sweet, aromatic, and pleasant; it is much eaten by the West Indians, and the European habitants of those islands; it is eaten in its raw or crude state, and also when preserved with sugar. The Red Guava, (P. Pomiferum,) and P. Cattleyanum, differ from the above in some particulars; the latter especially, has a fruit of a fine deep claret colour, with much of the flavour and consistency of the strawberry.

The cultivation of the species of Guava is simple, and unattended with any difficulty; they grow freely in a mixture of loam and peat, and being rather large growing plants, they require extensive accommodation at the roots: in fact, when they are cultivated for the sake of their fruit, they should be grown in tubs, in a manner similar to that in which orange trees are treated. The temperature of the stove is necessary for them; but, like most other tropical plants, they do not require a high temperature, kept up with uninterrupted intermission, but are much benefitted by a moderate declension of heat at the time they are brought to a resting state, by the decrease of the supply of water. This period should be the winter months, not only because much expense is saved by bringing plants to endure a less amount of heat at that season; but, also, because our summer months are best suited to the growth and development of tropical plants, in consequence of the supply of solar heat which they then enjoy, added to an increased proportion of light; whilst, therefore, rest is essentially necessary to the healthy and vigorous growth of plants, it is also desirable to induce them to assume that state at a time when they will suffer the least degree of loss, as regards the all-important principle of heat, accompanied by light, and transmitted by the direct rays of the sun.

A somewhat rich loamy soil, and a tropical temperature, are, therefore, to be regarded as the principal requirements in cultivating the Guava; it is not necessary to refer to the minutæ of giving air and applying water; these points being of course attended to in the

ordinary management of stoves. As regards water, however, it may be observed, that whilst in a free growing state, the Guava will require a considerable supply, this must be proportionably decreased whilst the plants are dormant; probably, the use of liquid manure would be of advantage during at least the growth of the plant through its young stages, in order to induce it to attain a desirable size before fruiting.

In propagation, the Guava presents no peculiar obstacle to the culturist, as it may be increased freely by seeds, cuttings, or layers; the cuttings should be planted in sand and covered with a glass.

Whether the Guava will be ever cultivated extensively in the stoves of this country, for the sake of its fruit, remains to be determined; it is, however, a subject deserving of consideration, whether many tropical fruits might not be cultivated with advantage, so as to supply a rich variety for the dessert.

[We beg to thank our correspondent for the above paper, which we hope will meet the wishes of our querist; the Guava is certainly deserving of more extensive cultivation than it receives.—ED.]

REMARKS ON PELARGONIUM, WITH A DESCRIPTIVE LIST.

BY T. M.

(Concluded from Page 51.)

In two previous Numbers, I have attempted to describe some of the best varieties of Pelargonium; the remarks there given were made from personal inspection of the plants when in bloom, and may, therefore, be relied on as conveying a faithful record of their respective merits. I now proceed to make some additions to those already given, from authentic sources.

a Douglas.—A first-rate flower, the upper petals vermilion rose, with a fine dark and very distinct blotch; lower petals a pure delicate rose colour.

a Hylas - Upper petals rose crimson, having a very dark veined spot; lower petals rosy crimson; a fine formed bloom.

Juno .- Upper petals, pink, with a purple crimson blotch.

a Mary.-Pink, with a flamed rose spot; a fine formed flower.

Master Humphrey.—Fine scarlet crimson flower, of good form and habit; a very desirable kind

Proserpine.—Upper petals pink, with a very dark blotch, nearly covering the petal, so as to leave around a narrow margin of the ground colour; lower petals pink.

Prince of Waterloo.—Orange crimson, upper petals with a large and very dark spot; lower petals, deep rose-crimson; a first-rate flower, of excellent habit, and a good trusser.

Queen of Beauties.—Delicate pink, with a flamed rose spot on the upper petals, the centre of the flower white, in the way of "Nymph;" a first rate flower, and an abundant bloomer.

- a Rowena,-Delicate rose-pink, with a flamed spot of deep rose colour; a good trusser.
- a Troubadour.—Beautiful rose, with a fine rich dark spot on the upper petals; a fine formed flower, and very free bloomer.
- a Tournament.—Fine rose, with a dark blotch; lower petals, purple; a distinct variety, possessing a good habit.
 - a Widow .- Crimson; upper petals, with a dark spot; lower petals, rose.
- a Witch—Blush white, with a fine dark veined blotch on the upper petals, running to a rosy purple near the margin; a fine flower, and a good habit.
- b Grand Monarch.—A first-rate flower, with upper petals of a delicate rosepink, with a very large dark spot; lower petals, rosy-pink; a beautiful shape, and free bloomer.
- c Madelina.—Fine bright crimson, with very dark spot; a free bloomer, and very distinct colour.
- c Cerito.-Rosy purple, with a dark veined spot; a fine flower, and very abundant bloomer.

Lady Cotton Sheppard—(Bennett's)—Blooms of this kind were sent us by Messrs. Rogers, of Uttoxeter; it was stated to be of good habit, and a free flowerer. Our note of the bloom sent rous thus; a finely formed flower, of large size, upper petals clouded with deep maroon, becoming paler towards the margin, and laced with light rose; lower petals rich light rose. One of the best kinds grown.

In the above list, those marked (a) were raised by the Rev. R. Garth; (b) by Mr. Kinghorn; and (c) by Mr. Lumsden. The following are the seedlings of E. Foster, Esq., which were exhibited at Chiswick; they will be sent out during the coming season. As a collection of seedlings, they were most splendid, and elicited the warmest admiration from all who saw them.

Etna .- A fine rosy crimson.

Medora.—A deep purple, very black upper petals.

Amulet .- A bright orange, but rather curls.

* Gypsey .- A beautiful dark flower.

** Jessie .- A most lovely orange scarlet.

Bertha .- A large pale flower, with a band of orange round the spot.

* Evelyn .- Beautiful pink; very round flower.

* Augusta .- Very bright pink.

Rhoda .- A very round, high coloured flower.

Jew .- Orange-scarlet, like "Rebecca," but much brighter.

 Comas.—A beautiful round flower, of a delicate pink, with a large veined spot marked in the way of "Beauty."

Those marked thus (*) are considered to be the best varieties; they will be offered for sale by Mr. Catleugh, of Sloane-street, Chelsea-

ON BLOOMING DENDROBIUM PULCHELLUM.

BY J. PLANT.

Your insertion of my former communication, induces me to send you the following remarks on Dendrobium Pulchellum, which flourishes here in a superior manner, under the following treat-



ment:—The plant is placed upon a log of wood, (poplar is the kind of wood employed,) having first a layer of sphagnum, or water moss, over the surface, a small portion is also spread over the roots, and the plant rendered firm by the use of metallic wire; the log is then suspended in an horizontal position from the roof of the house. These operations may be performed at any time, either with cuttings, or with established plants removed from pots.

The spring months are its usual time for blooming and commencing growth. When I perceive the buds beginning to swell, I commence watering, very sparingly at first, and gradually increasing the supply, so that they are watered freely during summer; when the growth is somewhat matured, and the stems assume a brownish appearance, I gradually reduce the supply of water until the stems shed their leaves and become perfectly ripened, I then give no more till the buds appear in spring.

The plants are at all times exposed to the sun, and during the growing season they are frequently watered over-head, with a syringe or engine, in the early part of the afternoon, just previously to the time of closing the house, the temperature of which varies from 55 degrees to 85 degrees. I also find this species to do well placed in a shallow basket, and suspended from the roof of the hothouse: this basket is made of copper wire, filled with sphagnum, pieces of wood, and plenty of small cracks.

D. Pierardi, under similar treatment, flourishes here remarkably well; the stems of this species after blooming require to be tied to the log or basket, and in the following season to be cut out.

REFERENCE TO PLATE LXVII.

PELARGONIUM.

1. Garth's Queen of Fairies.

2. Garth's Wonder.

NAT, ORD. GERANIACEÆ. CLASS MONADELPHIA HEPTANDRIA.

In the plate given in our last number, was a beautiful and faithful representation of one of the best varieties of Polargonium which the present season has ushered before us; in that given for the present mouth, will be found a no less faithful picture of two varieties, of at least equal merit, with that just referred to; they were raised by the Rev. R. Garth, of Farnham, Surrey, and have been grown and exhibited during the present season by Mr. Catleugh, by whom plants will shortly be offered for sale. As regards the particular merits of the flowers before us, we must offer a few remarks, furnished by our notes, taken at the time we saw them in bloom; Queen of Fairies, a most distinct and beautiful variety, decidedly the best of its class; its chief peculiarity consists in the margin of pure white, which surrounds the deep crimson maroon blotch on the upper petals, which, together with the purity of the lower ones, forms an

admirable contrast with the spotting; its form is also perfect, which, added to the abundance in which its blooms are produced, and the general good habit of the plant, marked it as one of the very best kinds.—Wonder,—a fine large light crimson flower, having a very large and distinct dark spot, it is also a good bloomer, and forms a most desirable kind in the class to which it belongs.

The cultivation of Pelargoniums is one of the engrossing objects of the present day with the floricultural public; and certainly the attention that has been paid to them has not been without some beneficial result, when we consider the improvements which have been effected, both in the form and colouring of the flowers, and the general character of the plants. What has been accomplished may be taken as a kind of foretaste of the improvements, which we may be justified in anticipating as the result of the strenuous exertions which are now making by a few spirited individuals; these improvements we take to be in the arrangement and distribution of the colouring of the flowers, and also in increased size; in form it is hardly possible to effect any very great improvement upon some of those we already possess.

For directions on the culture of Pelargonium, we must refer our readers to the papers of Mr. Catlengh and Mr. Cock, as abridged from the Gardener's Chronicle, and published at vol. 5, page 259, of this work; a list of desirable new kinds will also be found at pages 34 and 49 of the present volume, some additions to which are included in the number for the present month.

NOTICES OF NEW PLANTS.

TABERNÆMONTANA DICHOTOMA, Forked Tabernæmontana. [Bot. Reg. NAT. ORD. APOCYNACEÆ. CLASS PENTANDRIA MONOGYNIA.

A most fragrant and beautiful stave plant, resembling in appearance some species of Plumiera. It is a native of Ceylon, and also of Malabar, and is described by Dr. Wallich as a small tree growing from twelve to sixteen feet in height, with broad dark glossy foliage, and delightfully fragrant white flowers. It has flowered in the collection at Sion, and in cultivation requires a moist stove; a compost of equal parts of fresh loam, turfy peat, and leaf mould, should be used in re-potting the plant; it is also necessary when they are in a young state to top them frequently, to cause them to grow bushy and compact.

"The Sages of Ceylon, having demonstrated, as they say, that Paradise was in that island, and having, therefore, found it necessary to point out the forbidden fruit of the garden of Eden, assure us that it was borne by a species of this genus, the Divi Ladner of their country, and probably the plant before us. The proof they find of this discovery consists in the beauty of the fruit, said to be tempting, in the fragrance of the flower, and in its still bearing the marks of the teeth of Eve. Till that offence was committed, which brought misery on man, we are assured that the fruit was delicious; but from that time forward it became poisonous, as it now remains."

STATICE MONOPETALA, Monopetalous Sea-lavender.

Bot. Reg.

NAT. ORD. PLUMBAGINACE E. CLASS PENTANDRIA PENTAGYNIA.

A pretty shrub, found wild in the southern parts of Europe, and in the north of Africa; it is also mentioned as being found in Algiers, Portugal, the swamps of Calabria, and in the deserts of Alexandria, about the catacombs. It is nearly

hardy, and grows freely in rich light soil, flowering from June till September. It strikes freely from cuttings of the young wood. "There is something so peculiar in the habit of this plant, that notwithstanding the assertion of Linneus, that 'nullus sanus' would think of separating it from the genus Statice, we feel inclined to do so. In its corolla, with a very long curved tube, and the calyx, which scarcely enlarges after flowering, we have clear marks of distinction from the true Sea lavenders. Nevertheless, it is, perhaps, as well to leave it in Statice till the numerous other shrubby species shall have been carefully examined."

KAULFUSSIA AMELLOIDES, Amellus-like Kaulfussia.

| Paxton's Mag.

NAT. ORD. COMPOSITÆ. CLASS SYNGENESIA SUPERFLUA.

This old, though deserving annual, has been figured with a view to contrast its merits with those of a more recent favourite, the Brachycome iberidifolia, or large Swan Daisy. They belong to the same natural and artificial group, but whilst the latter from its delicate structure is suitable chiefly for culture in pots, the former being of a more robust habit, is peculiarly adapted for planting in beds or groups in the flower garden; its colours, too, are rather more brilliant than those of Brachycome. It is a half hardy annual, not at all scarce.

PHARBITIS LEARII, Mr. Lear's Gaybine.

| Bot. Reg.

NAT. ORD. CONVOLVULACEÆ. CLASS PENTANDRIA MONOGYNIA.

This plant has been figured in this work, and others under the title of Ipomœa Learii, and we notice it now to give the following historical particulars concerning it:—It first made its appearance at Mr. Knight's, of the King's-road, where it received its specific name, being supposed to be the produce of seeds sent from Ceylon, by Mr. Lear. It is not, however, to be found among any of the species described or occurring in herbariums; and from its not occurring in Dr. Lindley's own rich collection of Ceylon specimens, he concludes that some mistake must have occurred as to its native country. It has been raised from seeds sent from Buenos Ayres to the Hon. W. F. Strangways. It is nearly allied to Ipomœa (now Pharbitis) mutabilits, a beautiful Vera Cruz species.

MIRBELIA SPECIOSA, Showy Mirbelia.

Bot. Reg.

NAT. ORD. LEGUMINACEÆ. § PAPILIONACEÆ. CLASS DECANDRIA MONOGYNIA.

A New Holland shrub, with purple violet flowers, having a spot of yellow in the centre of the vexillum. It differs little from M. floribunda, noticed lately in this work.

BURLINGTONIA RIGIDA, Rigid-stemmed Burlingtonia. [Paxton's Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

Another lovely plant of this graceful order. Its habit is remarkably elegant; and the beauty of its flowers, which are white, tinged, and veined with pink, render it one of the most delightful of plants. The genus was by Dr. Lindley named in memory of the late Countess of Burlington, a lady of whom it is unnecessary to say more than that the plants which bear her name furnish a peculiarly significant memorial of her character. The present lovely species was bloomed by Messrs. Loddiges.

GONOLOBUS HISPIDUS, Hispid Gonolobus.

Botanist.

NAT. ORD. ASCLEPIDACEÆ. CLASS PENTANDRIA DIGYNIA.

A twining shrub, with ovate, cordate leaves, and umbels of brownish purple flowers, which possess a powerful and concentrated fragrance.

CŒLOGYNE CRISTATA, Crested Cologyne.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A most lovely species, with pure white flowers, except the lip, which is fringed with yellow; they are large, freely produced, and fragrant. It is a native of Nepal, growing on trees and rocks, and stands pre-eminent amongst the rich orchidaceæ of India. It requires to be grown in the most exciting part of the stove, and potted in turfy peat, the pots being well drained; water must be given less copiously in winter, and when the plant is resting, than in summer, when it is growing vigorously. The practice of drying the plant too much when at rest should be avoided.

CUPHEA MELVILLA, Melville's Cuphea.

Paxton's Mag.

NAT. ORD. LYTHRACE ... CLASS DODECANDRIA MONOGYNIA.

Introduced from Essequibo, in 1823. It is a beautiful stove plant, somewhat resembling a Salvis in habit, but far more beautiful on account of its numerous shoots bearing each a terminal cluster of flowers, which are curious as being composed entirely of a coloured calyx, without any petals; it is also interesting from the peculiar combination of crimson and green which they exhibit. It grows freely in an enriched loamy soil, and requires frequent pottings when growing, and a liberal supply of water, until its stems decay in autumn, after which it must be kept dry.

BEGONIA NITIDA, Shining Begonia.

Botanist.

NAT. ORD. BEGONIACEÆ. CLASS MONŒCIA POLYANDRIA.

A native of Jamaica, and known also as B. obliqua; it bears cymes of whitish flowers, which like many other species of the genus cannot be said to possess any very great beauty.

GENISTA BRACTEOLATA, Racemose Genista.

| Botanist.

NAT. ORD. LEGUMINACE E. CLASS MONADELPHIA DECANDRIA.

A very handsome greenhouse shrub, synonymous with G. racemosa. It flowers in March, and is of easy culture; Mr. Webb gathered seeds of it at Teneriffe, and it has also been raised by R. Bevan, Esq., of Bury St. Edmunds, under the name of Cytisus Chrysobotrys, but from whence the seeds were obtained is not known.

LOBELIA CAVANILLESII, Cavanille's Lobelia.

Botanist.

NAT. ORD. LOBELIACEE. CLASS PENTANDRIA MONOGYNIA.

A plant very nearly resembling in appearance the well-known Syphocampylus bicolor. "The genus Lobelia, though much reduced, may still require reform, L. Cavanillesii is among those in which a diversity of habit makes it desirable that a good technical character could be formed by which to separate them; cultivated in this country as a species of Syphocampylus, they neither agree with that genus in character or habit. The present plant is believed to be a native of Mexico."

EPIDENDRUM CALOCHEILUM, beautiful lipped Epidendrum. [Bot. Mag.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

A very fine species sent from Guatamela, by Mr. Skinner, to Woburn, in October, 1839, and flowered in the stove there the same month in the following year. It produces a scape from the base of the young pseudo bulbs upwards of

two feet in length, bearing flowers of which the sepals are of a yellow green, blotched at the apex with purple, the labellum yellow with reddish reins, the middle lobe large, deep yellow, with beaded crimson stripes, and the column yellow green, speckled with red.

MORMODES PARDINA, Leopard-spotted Mormodes.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A very showy plant, the flowers of which are yellow, spotted everywhere with deep blood-coloured spots. It was received from the gardens at Woburn Abbey.

TITHONIA OVATA, Ovate-leaved Tithonia.

Bot. Mag.

NAT. ORD. COMPOSITÆ. CLASS SYNGENESIA SUPERFLUA.

An hardy herbaceous perennial, resembling a small single Sun flower. It was raised from Mexican seeds by Mr. Glover, of Mauchester, and is only provisionally referred to the genus Tithonia.

STROBILANTHES SESSILIS, Sessile-flowered Strobilanthes.

[Bot. Mag.

NAT. ORD. RUELLIACEÆ. CLASS DECANDRIA MONOGYNIA.

A very handsome stove plant, raised at the Edinburgh Botanic Garden, from seeds sent in 1833, by Dr. Lusk, from Bombay. It produces funnel-shaped flowers, of a reddish lilac, shaded with blue.

SALVIA CONFERTIFLORA, VAR. Thick flowered Sage.

[Bot. Mag.

NAT. ORD. LABIACEÆ. CLASS DIANDRIA MONOGYNIA.

An extremely beautiful Brazilian Sage, discovered in the Organ Mountains; the flowers are of a beautiful bright red colour, and are thickly produced in numerous whorls. The plant attains three or four feet in height, and though it blooms in the open border in summer, it comes to greater perfection in a greenhouse.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

BERBERIS TRIFOLIATA.

A most beautiful evergreen shrub, raised from seeds collected in Mexico, by Mr. Hartweg, and distributed by the Horticultural Society. Dr. Lindley fears it will not prove hardy, but even if requiring a greenhouse, it yields to no species in cultivation. Its leaves are on long slender stalks, and have three ovate, glaucous sessile leaflets, with spiny sinuosities, and delicate veins; the flowers are unknown. It will long remain a plant of great rarity, from the difficulty of propagating such plants. Mr. Hartweg found it on the road from Zacatecas, to San Luis de Potosi, covering large tracts of country.

LYSIMACHIA LOBELIOIDES.

A pretty little perennial rock plant, introduced by the East India Company from the North of India, having white flowers, with pink veins, nodding and placed in naked racemes at the ends of the branches.

LINARIA VENOSA.

A perennial also introduced by the East India Company, with very narrow pale glaucous leaves, and dull yellowish brown flowers, painted with dark lines. It is near L. odora, and L. macruca, but seems different from both.

HÆMANTHUS MAGNIFICUS.

This splendid Hæmanthus was imported from South Africa, by Messrs.

Loddiges, and sent by them to Spofforth, where it has twice flowered in the greenhouse. It approaches very near to H. puniceus, and seems to form a link between that species and those with patent flowers, namely, tenuiflorus, multiflorus, and Abyssinicus. The immense number and contiguity of the flowers makes it almost impossible to represent the inflorescence of this beautiful plant, correctly by a drawing. It is easily cultivated, and deserves a place in every greenhouse, though, perhaps, only to be found in the collection of Messrs. Loddiges.

PEDICULARIS PYRAMIDATA.

A bardy perennial, with pinnated leaves in a whorl of four, and spikes of lively purple flowers, with a singularly long twisted beak to the corolla. A native of the North of India, introduced by the East India Company. Dr. Royle found it on the Himalayas towards Cashmere.

HEMIANDRA EMARGINATA.

A little herbaceous plant, related to Westringia, raised from New Holland seeds. It forms a small bright green bush, with rigid pungent leaves, and nearly sessile flowers, whose corolla is white, with a few pink spots. It is a greenhouse plant.

EUCALYPTUS CALOPHYLLA.

A greenhouse shrub, native of Port Augusta, on the south-west coast of New Holland. It has long ovate lanceolate light green leaves, and large white flowers. Seeds of it were sent to Captain James Mangles, R.N., by Mrs. Molloy, a lady enthusiastically fond of flowers, and to whom we are indebted for many acquisitions. Dr. Lindley remarks, "that the name of E. calophylla is current in gardens for this beautiful plant, but I cannot discover it in books."

HAKEA RUSCIFOLIA.

Although this plant was introduced years ago, it may be as well to mention that it has again been raised from New Holland seeds, collected near Swan River, and is in many gardens without a name. It forms a low grey bush, thinly covered with long white feeble hairs. The leaves are narrow, oblong, tapering to the base, and extended at the point into a spine of variable length. The flowers are pure white, with a faint smell of honey, and grow in dense umbels, shorter than the leaves. In the form and size of the foliage, this plant seems to be greatly influenced by climate, the leaves becoming small, and the spine long, as the air is hot and dry, or long and large, with a short spine, as it is cool and damp. Age, too, has no doubt an effect upon the species in this respect. It is a good greenhouse shrub.

HYMENO CALLIS PANAMENSIS.

A beautiful fragrant plant, with erect leaves, and a scape rising more than a foot high, producing ten or twelve flowers in an umbel, the tubes of which are six inches long, green at the lower part, and white at the upper. The limb is white, and the coronet pure white, the filaments are green, and the anthers deep orange colour. It has flowered in the Horticultural Society's Garden, and was sent from Panama by J. Cade, Esq., H.M. Consul in that country.

BORONIA OVATA.

A beautiful dwarf shrub, with the habit of some species of Hypericum. The flowers are in loose terminal corymbs, with capillary peduncles, more than half an inch long; they appear to be deep crimson. A native of mountains in the vicinity of the Swan River.

ONCIDIUM MONOCERAS.

This plant, figured under this name in the Bolanical Magazine, does not appear to differ from O. unicorne.

STANHOPEA MARTIANA.

A rare plant, native of Mexico, and bloomed in the collection of R. Harrison' Esq., of Aighburgh. The plant has been already noticed in Vol. 5, p. 69.

STIGMAPHYLLON CILIATUM.

A climbing plant from Brazil, lately flowered at Sion. It has heart-shaped leaves, of firm texture, and having a shining surface; its flowers are in axillary umbels, rather large, and bright yellow. It is a handsome stove plant.

ROSCOEA LUTEA.

An herbaceous plant, with leaves like those of Ginger, and pale buff flowers with bracts, and calyx purple. It is found in Mussooree and elsewhere, in the Himalayas during the rainy season. Mr. Rogers received roots two or three years ago, and finds it flower and flourish in a greenhouse during summer. It is not a plant of much beauty.

EPIDENDRUM GRAHAMI.

Stated to be a native of Mexico, and flowered in the Edinburgh Botanical Garden. Dr. Lindley states that he does not see how it differs from E. altissimum, except in its being a small imperfectly formed specimen.

EPIDENDRUM BISETUM.

A native of Guatamela, imported by Messrs. Loddiges, and allied to E. nutans, but having smaller flowers, more compactly arranged, and with a strong, smell of cowslips.

BORONIA MOLLIS.

A noble species, allied to B. paradoxa. It has very narrow sepals, and the bracts upon its pedicles are setaceous, not obovate.

BORONIA ANETHIFOLIA.

A native of the interior of New Holland. In this species the flowers are small and closely collected on the short panicles, which are not half the length of even the uppermost leaves.

BORONIA DICHOTOMA.

A gay pink herbaceous plant, which grows quite on the water's edge, upwards of three feet high; its flower stalks are fragrant and viseid. It grows in loam with a mixture of sand, on the beautiful turn of the River Vasse, and blooms in October and November. It is near B. denticulata, but very distinct.

BORONIA FALCIFOLIA.

A singular plant with tapering ternate leaflets, irregularly curved in one direction, so as to acquire a truly sickle-shaped figure. The flowers are solitary is the axils of the uppermost leaves, where they form small leafy racemes. A native of Moreton Bay.

MISCELLANIES.

BEGONIA.—The affinity of the order to which this genus belongs, is by the analogy of properties in favour of Polygonaceæ. "Begonia grandiflora and B. tomentosa have bitter astringent roots, which are used in Peru in cases of hæmorrhage and scorbutus, like Bistort with us; B. odorata and B. suaveolens are fragrant like Polygonum odoratum; Rheum ribes, yields in the East a cooling drink; a similar one is prepared in Brazil, from several species of Begonia. Oxalate of Potass is obtained from several species of Rumex, so likewise from many species of Begonia; sundry Rumices are used as sorrels, and the leaves of this species are known in Jamaica, and those of B. obliqua in Martinique as the "Sorrel of the Woods;" while in Brazil the leaves of B. ulmifolia, bidentata, spathulata, cucullata, and hirtella, are all used as cooling salads; lastly, the root of B. obliqua is called "Wild Rhubarb"—Botanist.

MR. LOWE'S NURSERY, CLAPTON .- Whilst walking round this establishment we noticed a very beautiful species of the Lobelia, cultivated in a pot, and placed in one of the greenhouses. At the first glance it might have been taken for a well-blown plant of L. heterophylla, but a minute examination and contrast of the two plants, soon displaced such an impression. The plant in question is believed to be annual, and presents the general habit of L. heterophylla, but is readily distinguished by its flowers of double the magnitude of that kind, and also by the much greater intensity of its lapis blue. It is not, that we are aware of, named. A very interesting feature in this establishment is a pit which has recently been erected, and in which are planted a quantity of new, rare, and valuable plants, chiefly intended for propagation. Amongst others we noticed Statice Dickinsonii, in good health, which if it can be brought to survive the winter, will probably be found to flourish freely. In one of the greenhouses we saw Boronia viminea beautifully in flower; this little species, a diminutive of B. denticulata, in general appearance promises to rival the existing beautiful species of the genus. The stock of plants in this Nursery is very extensive, and in most excellent condition.

Detached trees ought never to be placed on the summit of a hill. It is indispensable that, wherever the sky forms the back ground of a scene, or, in other words, where there are no distant hills, or other objects intervening between the top of an eminence, as seen from a principal or central point of vision, and the sky-or where the hill spoken of constitutes the horizon of the spectator-broad expansive masses of wood or turf should alone be visible; and even when, for the sake of ensuring variety, these are interspersed with smaller groups, single trees would stand out too boldly, too distinctly, and interfere too abruptly with the apparent, though irregular continuity of the line of the horizon, to be at all pleasing. The desideratum in such instances appears to be an agreeable undulation of surface only, which is best created by the tops alone of intermingled spiry and round-headed, conical and fastigiated trees. Wherever, therefore, au individual tree surmounts a hill, it evidently wants a smaller one on either side of it, to render its upper or external line continuous with the turf below; otherwise its bare stems, and the reduction of its diameter towards the base, (this being precisely the part where it is required to expand,) would have a very disagreeable appearance .- Paxton.

The woods of Demerara have the trunks of the trees frequently ornamented with the pendant flowers of Coryanthus maculata. As if to form a contrast with the nearly regular flower of Paxtonia rosea, the parts of the flower assume every possible peculiarity, rendering the spectator doubtful whether he be looking at a flower, insect, or a bird. The lip is furnished near its base with a yellow cup, over which hang two horns constantly distilling water into it, and in such abundance as to fill it several times; this cup communicates by a narrow channel, formed of the inflated margin of the lip, with the upper end of the latter, and this also is a capacious vessel very much like an old helmet, into which the honey that the cup cannot contain may run over. The object of this secretion, probably, is to attract insects or birds, which by the disturbance they cause in extracting the honied fluid, assist in the fertilization of the seeds. Robert Brown believes that many orchidaceous plants, except Ophrys and its kindred, are dependent on insects for accomplishing the process of fertilization. Humming birds with their long slender bills, appear likewise to contribute to this object, and their small size and lightness seem to fit them well for this office. -Botanist.

The Winter Garden or Conservatory of the Palace of Taurida, in St. Petersburgh, is thus described by Storch:—"Along one side of the restibule is the winter garden, an enormous structure, disposed into a garden, only separated from the grand hall by a colonnade. As from the size of the roof it could not be supported without pillars, they are disguised under the form of palm trees. The heat is maintained by concealed flues, placed in the walls, and pillars, and even under the earth leaden pipes are arranged, incessantly filled with boiling water. The walks of this garden meander amidst flowery hedges, and fruit bearing shrubs, winding over little hills, and producing at every step fresh occasions for surprise. The genial wermth, the fragrance and brilliant colours of the nobler plants, and the voluptuous stillness that prevails in this enchanting spot, lull the fancy into sweet romantic dreams; we imagine ourselves in the blooming groves of Italy; while nature, sunk into a death-like torpor, announces the severity of a northern winter, through the windows of the pavilion.

PROPERTIES OF THE PELARGONUM .- The flower should be large, and composed of broad rose-leaf petals, free from crumple, or unevenness of any kind, smooth on their edges, and forming a compact surface, round which, if a circle be drawn, the perfect symmetry of the flower would appear by the extremity of each petal touching the circle without extending beyond it. It is indispensible that the flower be of a stout firm texture, with sufficient liberty at the bottom of the cup, to prevent its being in the least cramped, but allowing it to retain when fully expanded, a fine cut form, and preventing the falling back or reflexing of the petals. Its colour, whether rich or delicate, should possess great clearness; the under petals must be free from veins, and the upper petals should have a large dark spot, running to the bottom of them, as destitute as possible of a small white feather, which is usually present, and which greatly impairs the richness of this important part. The beauty of the flower is greatly enhanced by having this spot clearly defined, and if it is surrounded by a dash of crimson, that should have a distinct termination also. The petals should be quite free from any appearance of a watery edge. Finally, it is essential that the leaves should be large, delicate, and have a healthy appearance, and that the truss should be composed of several flowers, supported by a firm footstalk, standing quite clear of the foliage .- Gard. Chron.

QUERY.—Being interested in Floricultural, as well as Horticultural and Agricultural pursuits, I would feel obliged by your opinion as to the use of decayed bark, either alone, or mixed with horse or cow dung, or both, as a manure. You would further oblige by inserting this query in your next number, which may call the attention of some of your numerous readers to the subject.—J. E. M.

MONTHLY CALENDAR.

FLOWER GARDEN.—Those annuals and half-hardy plants which have done blooming, or may have been rendered unsightly by frost may be now cleared, and in their stead may be planted tulips, hyacinths, narcissus, and other bulbous rooted plants, choosing dry weather for performing these operations. Take up dahlia roots, and let them be well dried previously to storing them away. Hardy perennials may still be planted. The fallen leaves of trees must be daily swept from gravel paths and lawns; they should also be frequently rolled in dry weather, as at this season, when every thing is assuming an aspect of glooniness and langour, there is nothing in a garden which conduces more to individual comfort, or which is more cheering to the eye, than well kept gravel paths and smooth green carpets of lawn.

PLANT STOVE AND GREENHOUSE.—The directions of last month apply to this also; a low temperature in the former, and a free admission of air in the latter, with a dry atmosphere in both, are the conditions which more especially require attention. In the greenhouse make no use of fire heat unless to repel frost.

KITCHEN GARDEN.—The operations here will consist chiefly in those which are conducive to order and cleanliness, and in protecting such plants as require it and making preparation for another season. A few peas and beans may be sown, and radishes and small salading on a gentle hotbed; sea ka'e may also be covered if wanted very early, and asparagus forcing in dung frames may be commenced. The beds of asparagus in the open quarters should be cleared, and some littery dung spread on them. All vacant ground should be trenched, and the soil laid up in ridges for the winter.

FRUIT GARDEN.—Fruit trees may be planted, if the weather is dry and open, they should be supported by stakes and mulched. All hardy fruit trees may also be pruned, and the ground manured, and dug lightly about them.

FORCING GARDEN.—Keep the pine stoves and pits at a regular but moderate heat. At this season the supply of natural light is but limited; it is, therefore, necessary to bear in mind that the proportions of heat, air, and water, should be in accordance with that of light. Vines for early forcing should be pruned, if not already done, the house made quite clean, and everything set in preparation. The atmosphere in late vineries must be kept dry. The light should be put on peach houses intended for early forcing; but no fires ought yet to be made. Cucumbers in frames must not be neglected, they require the application of all stimulants to vegetation, with all the care that man can bestow.

PLEASURE GROUND, PARK, &c.—Plant all kinds of trees and shrubs, if the situation be dry and the weather; if not, it will be better deferred till spring. Prune such trees as require it; make preparations for planting by digging, leveling, &c., and prosecute in suitable weather all operations in landscape gardening,

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXVII.—DECEMBER, 1841.

REMARKS ON FORCING THE VINE.

BY R. B. WILSON, NORTON, NEAR STOCKTON.

Should the following remarks on the culture of the Vine, under glass, as practised here, be deemed worthy of insertion in the Floricultural Magazine, they may not be without use to some of your numerous readers. I do not wish to imply that I shall be able to afford any instruction to the experienced Gardener; but to those who are entering on, or are but little advanced in the profession, as well as to the Amateur, they may prove of some value, being the result of practical experience. I am fully aware of the diversity of opinion that exists on this topic amongst Gardeners; but feeling convinced that where soil and situation are the same, there can be but one proper system, I am induced in most instances to recommend that followed by our predecessors. It is true that the science of Horticulture has, within the few last years, attained a degree of perfection unknown to our ancestors; but when we take into consideration the inferiority of the agency employed at no remoter a period than the time of Speechly, compared with that of the present day, it must be allowed that they had difficulties to contend with which are now nearly vanished, and which will be unknown to succeeding generations; yet, as far as we can judge by the produce of Speechly's Vines, we must, in justice to him, allow that he produced as good grapes as any of our modern Horticulturists.

Before entering upon the subject of cultivating the Vine under glass, it will be well to offer a few remarks upon the formation of the structure which may be deemed most proper for carrying on those operations. Some persons consider the angle of elevation to be of great importance, but I have seen Vines grown with equal success in structures in which that angle has varied from 20 degrees to 50 degrees; but the generality of vineries are constructed at an angle of about 40 degrees, or but slightly varying therefrom. The

front wall of the structure should be built on arches to within a few inches of the surface of the border, in order that the Vines being planted inside the house, their roots may have free egress to the prepared border outside; it should also not exceed from one foot to one and a half feet above the surface, neither need the structure be provided with anything like upright sashes in front. The roof should be formed of two series of lights, the lower ones sliding upwards, and the top ones sliding down, by means of weights concealed in the back wall: this will afford more than ample accommodation for ventilation, though the latter object may be effected by placing small shutters in the front and back walls. I would have all forcing-houses heated by an hot water apparatus, erected on the simplest principles, the pipes being laid in a water tight cavity, such as I recommended at page 226 of the last volume. By this means a dry or moist atmosphere can be obtained at pleasure, the due regulation of which is so indispensably necessary in the cultivation of all edible fruits.

The next important point to be considered is, the formation of the border; upou due attention to which, depends very much of the success and well-doing of the plants. The border should not be more than two feet deep, at the front wall of the structure, and sixteen inches at the extremity; it ought to extend thirty feet, including the width of the house, and should form an inclined plane, gradually sloping to the south. The compost I would recommend would be, the turf from a hazelly loam, well enriched with manure; but for all the particulars of constructing the border, your readers cannot be better informed than by referring to a paper on the subject, in the last volume, page 175, written by your correspondent T. Moore.

As to the mode of propagating the Vine, there are various methods recommended; but without at all calling in question the rationality of the opinions of others, I have no hesitation in saying that plants raised from single eyes are, in a general sense, decidedly preferable to those originated by any other process. These, when judiciously managed, are suitable for planting out during the mouths of June or July in the second year after raising them from the bud. The following is the process :- Supposing the plants, after the first year's growth, to be headed back to one strong eye, and excited during Spring in a dung bed; shifted into larger pots as often as the roots are found to abound; removed into a forcing-house which may be at work when their shoots are two or three feet in length; watered frequently with manure water, and kept in this position until their shoots are ten or twelve fect in length, they will then be in a condition for planting. Presuming that the border has been prepared during the previous autumn or winter, and has settled down to within six inches of the arches in the front wall, let the soil both in and outside the house be

dug out to a little below the top of the arches; then choosing damp or cloudy weather for the operation, take the plants and carefully turn them out of the pots, and take the ball of earth through the opening to the border outside, then with great care proceed to disentangle the roots without injuring them, and spread them out horizontally in a radiated manner from the stem; this latter should be divested of 3 or 4 of its lower leaves, on that portion which would be buried in the soil, and a slight tongue made below each joint so covered; the roots must be carefully covered in with a light rich soil to the depth of about six inches, and if any shading is found to be necessary, it must be promptly afforded them; thus treated, the plants will make strong shoots, and shew fruit in abundance the following season*.

The distance apart at which Vines should be planted, is a point entirely depending upon the kinds selected, or it may be upon local circumstances; in my opinion the Black Hamburgh, and similar growing sorts, ought not to occupy less than two or three rafters when established, whilst the more delicate kinds, such as Frontignans, should occupy but one: these kinds should also be planted by them-

. Upon this part of the subject we would offer a few remarks. We do not at all question that healthy and vigorous young plants, if placed in nourishing and stimulating soil, will produce strong shoots, and that these shoots will show abundance of fruit, there can exist no reasonable doubt. When, however, Vines are planted in structures, which it is intended they are to occupy permanently, and from which, fair average annual crops are afterwards expected, the practice of allowing them to mature fruit during their infancy, cannot be too strongly reprehended. During at least the three first years after planting them, (especially if planted as recommended in this paper) they ought not to be deprived of a particle of nourishment, expended in the form of maturing fruit. but being allowed abundance of light and air, a due expansion of foliage should be encouraged, so that the elaborated sap may strengthen both the roots and stems, and thus render them capable of duly maturing the crops afterwards. For the same reason Vines should never be suffered to produce heavy crops, except under peculiar circumstances: for it may be confidently asserted, that all the evils attendant on the culture of grapes have their origin in the debility of the plant, brought on either by taxing to too a great an extent the energies of vital action, or by a superabundant supply of food; either of which, in vegetable as well as animal life, will have the effect of producing a general debility, and it is then that both are more peculiarly laid open to the attacks of disease. In the case of Vineries, from which the proprietor may desire to take crops at the very earliest period after planting, a few strong, and well-established Vines might be introduced, and from which fruit might be taken during the period that the permanent Vines were becoming well established at the roots; when such was the case, the temporary Vine might be removed, at a very trifling amount of sacrifice, whilst at the same time much would be gained in the constitution of the permanent plants. For the same reason, with Vines grown and fruited in pots, the case is different; for being annually raised and destroyed, or at least not annually submitted to the artificial stimulus of forcing, it becomes an object to induce them to produce fruit as speedily as possible.— En.

selves, as much as circumstances will permit. It is better to plant too many than too few, as they can be cut out afterwards if necessary.

The next thing to be considered is, the manner of pruning; the great object aimed at by which is to fill all parts of the house equally with bearing wood: in my opinion, the success of Vines depends much more on a proper soil and atmosphere, than on any mode of pruning or training. If large bunches and berries are wanted, the long rod system must be followed; but if a larger quantity of medium-sized bunches are in requisition, the spur system is decidedly preferable. I follow both, as I find that Vines which are strong, and long-jointed, do best when trained on the long rod system; with those which grow round, and short-jointed, on the other hand I practice spur pruning.

I shall now endeavour, as far as I can, to point out the principal features in forcing the Vine under glass. It is not necessary here to enlarge on the treatment of young Vines, previous to their bearing; suffice it to say that it is unnecessary to apply any stimulus until the buds commence swelling: that is, if they have been planted in March, as is recommended in general. We will, however, suppose them to have been planted in June or July, in the manner above detailed, and to have now arrived at a bearing state, healthy, and in good condition; in this case the pruning should be performed in October or November. In establishments where there are several forcing-houses, it is a frequent practice to commence forcing the earliest on the 1st of January, and sometimes as early as the 1st of December; the beginning of February, is, however, a good medium period for commencing, we will, therefore, suppose that fires are made about that time. About a fortnight previously let the border, inside of the house, be carefully forked up, but so as not to injure any of the surface roots which will have proceeded from those parts of the stems which were brought through the arches, and tongued at the joints; then let the whole surface, inside and out, be covered six or eight inches deep, with good rotten cow dung, free from litter, giving one or two good waterings, [?]; let the walls also be well washed with quick-lime, and the stems of the Vines, with a mixture of soft soap, sulphur, tobacco water, and a little nux vomica, well boiled together, and laid on the Vines with a painter's brush when cold; the house should be shut up every night, and also through the day in unfavourable weather, from the time that an increase of temperature is maintained. every thing has been thus put in order, the Vines may be fastened to the trellis, excepting young Vines, and such as are trained on the rod system; these should be allowed to hang from the trellis in a curvilinear manner, in order to cause the stems to break their buds regularly, as when tied to the trellis, the buds at the extremity will, by the

force of the ascending sap, break sooner and more vigorously than those towards the base, and thus rob them of a due share of nutriment, unless some artificial means, such as the above, is applied to retard them for a time.

From the period when the fire heat is commenced, the Vines must be well syringed every morning; the pipes and floor of the house, as well as the walls, must also be sprinkled at intervals during the day, and both morning and evening a good steaming must be given, in order that the atmosphere may be kept moist, which will greatly facilitate the breaking of the buds, in a regular and satisfactory manner. The temperature of the Vinery, previous to the application of fire heat, should be gradually raised by taking advantage of sun heat from sixty degrees to sixty-five degrees by day, and forty-five degrees to fifty degrees by night: and from that time until the buds break, which will generally be about a month, it should be raised to seventy degrees by day, and from fifty-five degrees to sixty degrees by night, and from the time the buds break until the Vines are in flower, it may be raised to eighty degrees and eighty-five degrees by day, and seventy degrees by night; in all cases, however, the increase must be effected gradually. Syringing the Vines, and moistening the atmosphere, must still be kept in mind; and, if the weather prove severe, the border outside the house should be covered with hot litter; indeed, where the forcing-houses do not face the flower garden, or any conspicuous spot where litter would be an eye sore, the Vine border should at all times be covered with a thick layer of hot dung, which should be renewed as frequently as the heat declines. This should be continued until April; its beneficial effects being in keeping the roots and branches in a uniform temperature, and also in conducing to draw the roots to the surface of the border within the influence of the sun and air. As soon as the Vines commence expanding their clusters of flowers, the use of the syringe must be discontinued so far as to avoid wetting the blooms: in its stead, recourse must be had to watering the hot pipes, and flues, &c.; which I would recommend to be particularly attended to. I am aware that on this point there is some diversity of opinion, and it has been severely contested in the Gardener's Chronicle, owing to Mr. Paxton having stated, in his weekly calendar, that a dry atmosphere was necessary to promote the proper setting of the berries; now I do not mean to dispute the rationality of Mr. Paxton's assertion; on the contrary, I should consider his abilities indisputable with respect to gardening; but, nevertheless, I hold exactly opposite opinions.

"'Tis very true
My skill may well be doubted,
But facts are chiels, that winna ding,
An' downs be disputed."

From my boyhood until now I have seen them set, and set well, in a moist atmosphere; as an instance I may quote the Muscat of Alexandria, which was mentioned as a bad setter. Now I have it here as close and as well set as the Black Hamburgh, all over the house, and that too in a moist atmosphere, as moist as I could keep it by wetting the floors, &c., during the day, and steaming from the pipes at night; in fact, any grapes will set well in a moist atmosphere, if attended to, keeping the house rather close, with a due attention to light, by not having the spurs too crowded, and by a little care in brushing over the bunches of the shy setters with a flat camel's hair brush.

The next thing to be attended to, is, the summer pruning; those that are spur trained, I allow to run five or six joints beyond the bunch, and then gradually stop it back to within two joints of the fruit; never allowing more than one shoot to a spur, and if a lateral is produced, it is stopped beyond one leaf.

October 8, 1841.

(To be Continued.)

ON THE GROWTH OF STANHOPEAS.

BY MELROSE.

Amongst the multitude of orchidaceous plants which have been introduced of late years to our notice, the genus Stanhopea holds a conspicuous rank; and, though it cannot boast of so great a variety as some of its congeners, it is at least worthy of an equal rank on the point of beauty. There are also many recent additions which have been made to the genus.

The culture of the species is so very similar, that it will be unnecessary to particularize any individual kind; I will, therefore, at once proceed to mention some of the various modes of treatment, which I have practised, and seen adopted by others. Blocks of wood, with the rough bark attached; baskets, made of copper or other wire, or of wood; the shells of cocoa, or other nuts; blocks of stone, or artificial rock-work; iron baskets, and ordinary pots, are all used with more or less success. The most objectionable is, baskets, formed of iron hoops, which, by the dampness of the atmosphere, soon become rusty, and thereby do considerable injury to the delicate roots; on artificial rockwork they succeed tolerably well, but, it is necessary to plant them on a projecting or overhanging spot, in order to allow the flower stems to push out, these latter alway proceeding from the roots downwards. In such situations, and also when suspended on blocks of wood, they require a portion of moss about their roots, to retain moisture; they

will grow when suspended over a tank of water, without any envelope to their roots, but none of these methods seem to answer so well as the basket, composed of round pieces of wood, about an inch or more in diameter. These must be made of a size suitable to that of the plants, but, inasmuch as that they do not like to be frequently disturbed, the size of the basket should be proportionably large, rather than otherwise. The operation of planting next deserves consideration; in doing this, the first point to be observed is, the provision of soil. The most suitable is, that kind of turfy bog earth, which is used as firing in those districts where it can be obtained, and the lighter this is, both in weight and colour, so much the better will it be suited to the plants under notice: in short, the very black and heavy peat is the worst possible soil that can be used, for, from its hardness, the flower spikes are liable to suffer injury in penetrating through it; besides, which, the roots do not appear to thrive when planted in it. The soil above recommended should be collected when quite dry, for 1 consider it more liable to get soured when used fresh from the bog, than after it has once been thoroughly dried. When the operation of planting is to be performed, soak the turf in water for a day or two previously to using it, then cut it into small pieces, about an inch square, with which mix some rotten wood; then half-fill the basket with the roughest pieces, and taking the plant in one hand, and placing the basket on the bench, fill in the soil, mixing it well among the roots, and taking care that the upper part of the bulbs are an inch or two above the top of the basket. When the latter is full, cut some thin slices of the turf to fit neatly over the whole, fastening them on with some wooden pins, made about three inches long-these will hold on the covering until the roots take hold of it; in placing them, however, it is necessary to be cautious so as not to injure the roots, Having finished the planting, give them a good washing with the syringe, and then suspend them from some convenient part of the roof. The temperature they require when growing, is from seventy to seventy-five degrees by day, and from sixty to sixty-five degrees by night. The atmosphere must also be kept moist by sprinkling the pathways, and the flues, or pipes: these, in most places, are covered with shallow zinc gutters, which are constantly filled with water to produce evaporation, and so beneficial are they found, that I would recommend them to be adopted in all cases where that has not hitherto been done.

[These plants, like most other Orchidacea, require a resting season as well as one of excitement; this period of rest, should, in the genus now under consideration, take place as soon as they have completed their growth, and ripened their pseudo bulbs. Whilst in this state, they should receive little or no water, and a considerable decrease of temperature, compared with that in

which they grow, an average of sixty degrees being abundantly sufficient. For this, as well as other reasons, the cultivator of Orchidaceous plants, should be provided with at least two houses, in one of which the course of progressive excitement should be followed out; whilst, in the other, that of quietude and repose should be duly attended to. The period at which the genus Stanhopea should receive its re-potting, is not mentioned by our correspondent; we will, therefore, supply the deficiency, by stating, that the end of July is about the general period at which it can be most advantageously performed, as, at that time, their growth will be commencing, and they will be in a condition to be benefitted by the application of any stimulus: for, if potted in the resting season, they will be liable to rot, if water is given; and on the other hand, that element is withheld, they will be liable to shrivel. In the construction of the baskets, our correspondent has recommended, it should be borne in mind, that a space of at least two inches should be left between the bars of which they are composed, in order to allow the ready egress of the flower spike.-ED.]

REMARKS ON THE PASSIFLORA KERMISINA.

BY S.

In the October Number of this Magazine, a correspondent inquires if the Passiflora kermisina would succeed in a conservatory which he describes; and as I have seen it grown and flowered freely in a similar situation, a few brief remarks may be acceptable. About the early part of May, a strong plant of the kind in question was turned out into the border of the conservatory, which was composed of good loam and peat, in nearly equal proportions, with a small quantity of In this the plant grew vigorously, and flowered profusely during the summer and autumn months In such a situation, however, I have never seen it survive the winter, nor do I think it will in any common greenhouse or conservatory; but if your correspondent is fortunate enough to possess a stove, he may very easy have a strong plant to turn in his conservatory every spring, which will well repay him for his trouble. Cuttings of the ripened wood, taken off any time during the summer and autumn, three or four joints long, planted in sand or sandy mould, and plunged in heat in the propagating house, will root with the greatest freedom, after which they should be potted off, in soil composed of nearly equal parts peat and loam, made quite sandy, and kept in the stove during winter, and planted out in the conservatory early in spring; or the old plant may be taken up late in the autumn, after it loses its leaves, the shoots cut back, potted into as small a pot as possible, and kept in a cool part of the stove, and turned out early in spring.

A CONTINUATION OF AN OLD DISPUTE; OR, ARE THE LONDON, OR THE LANCASTER FLORISTS THE BEST JUDGES OF TULIPS.

BY JOCK FLORUM.

I think that Mr. Slater, in his remarks in a contemporary Magazine,* upon the taste of the northern and southern florists, has shown very clearly, that a young fancier may safely be guided in the formation of his collection, by the advice of the southern Tulip amateurs. It is admitted by Mr. Slater, that he and his brother florists are behind the southern growers in raising tulips from seed; and in a former article of his, in the same work, he states that the northern amateurs are unable to purchase the seedlings raised in the south, their means being too limited: and if they neither raise the best Tulips from seed, nor buy other people's, I should like to know upon what grounds they can claim to be first-rate growers; or, why they deserve to be complimented, by allowing them, when "the subject is viewed in a calm dispassionate manner, to be too fastidious."†

To attempt to compare the northern and southern collections of Tulips, is a most ungracious task. In pages 201 and 202 of the work already alluded to, Mr. Slater establishes all that a lover of good Tulips would wish, and that is, the necessity of an extended growth of the London prize flowers. A stand of such Tulips at Lancaster, as has been seen at Hampton, would quite destroy the prospects of the dealers in "Doolittle," and "Lord Hill;" and put to rest the long contested question about the properties of the Tulip.

It is amusing to hear of the expedients resorted to for continuing the cultivation of old and worthless sorts, and also for accounting for wretched looking things, "dropping into a stand, by accident." Why in the north, the thing is usual; and in a list of the prizes at the great Lancaster show, in 1839, "Doolittle" took the first prize for feathered roses, and besides this, it, and "Lord Hill," were in the first and second pans: and as to the colour, at the same show, "Roi de Cerise," and "Unique," took the first and second prize, in flamed roses, which are allowed by all to be dirty flowers. In all the show there was not a "Polyphemus," or a "Strong's King," a "Siam," or a "David," a "Lac," or a "Camuse."

This is not a Tulip-growing locality, the mildness of the climate enabling many flowers only half-hardy in the north, to be grown here with little or no protection; and this excludes many esteemed florist's flowers from receiving particular attention; but, as principles of taste exist in all minds, so, until they are perverted by educational

[·] Harrison's Floricultural Cabinet.

⁺ Vide page 201 Floricultural Cabinet, 1841.

prejudice, they develope themselves in a natural and rational manner. Now, I have purchased several of the most esteemed flowers grown in the north and in the south, and have grown them expressly for the purpose of comparing their relative merits, and also to fix my own purchases by, in the formation of a large collection. It may be well to remark, that I had never, previously to their flowering, seen a good tulip bed, and I was quite free from prejudice; although, from the specious statements of a certain florist, I was rather prepossessed in favour of the beautiful colours, said to predominate in the favourite stage flowers of the north. There stood "Polyphemus," and "Strong's King," the southern favourites, with old Dutch "Catafalque," and "Captain White," the northern pets, beside them; and the comparison was peculiarly disadvantageous to the latter, whilst "Doolittle," when compared with " Dutch Ponceau," was really pitied, it looked so contemptible when compared with that and some other finely cupped and stout petalled varieties of more worth, but less notoriety. The result is not at all wonderful, but quite obvious, for the visitors all considered. (and they had never seen fine tulips before,) that a good form is essential to the beauty of any flower, because, without that property, it cannot display its other points of beauty to advantage; and then it was invariably admitted that a clear bottom was necessary, to allow the markings to be beautifully finished in their disposition: and it may moreover be confirmatory of these opinions to observe, that at the county show, this year, the best stand was all but rejected, because "Doolittle" had a flimsy look; although the judges were entirely ignorant of the peculiar beauties or properties of tulips. One of the judges told me this, and also that it quite spoiled the effect of the others. I was the exhibitor, and it was placed there to see what would be the opinion of unprejudiced people, about the claims to pre-eminence advanced by the northern and southern florists.

In conclusion, I would add, that it is my intention to recur to this subject again, not long hence, when I shall submit to your readers a long contemplated paper, upon the history of the Tulip, and its present state in this country, remarking more particularly upon the merits of some of the leading new and old flowers. The latter subject, the most important one to a collecting florist is, I regret to say, almost overlooked by the contributors to your Magazine, who have hitherto said every thing that can be well said about soil and management, two things, by the bye, that "manage themselves," according to a grower's means and the soil of his locality.

The planting season is nearly arrived, and I would seriously recommend every young florist to buy very cautiously, to buy only really sterling sorts, and to buy of a florist of eminence, who has an established character, and one who can afford to warrant his roots true

to their names, and in a fine strain; such a florist I have found Mr. Alexander, of Lamb Farm, Kingsland, near London to be, who, in short, has a first-rate collection, who is an excellent judge of florist's flowers, an experienced grower, and, as a friend who first named him to me, said (one of the most distinguished raisers of Tulips this country has produced,) "an honest man, no small compliment for a florist." With such a man, a small sum or a large one can be expended satisfactorily; and I will conclude, Mr. Editor, by saying, that one good Tulip a year added, gives more real pleasure than a hundred meretricious varieties, having high-sounding names, but glaring faults.

Tulip Lodge, October 14th, 1841.

ON THE CULTURE OF THE MULE PINK. (Dianthus hybridus of Gardens)

BY W. M.

Having commenced a series of articles on the culture of a few of our old ornamental plants, I have thrown the following remarks together, which, though not presenting any new feature in the culture of the plant under consideration, may notwithstanding be of service to persons who may not have had an opportunity of closely observing the habit of the plant. I believe it is generally admitted that the modes of culture adopted with the genus Dianthus are not so applicable to this particular species as to others. I will here give the result of a mode of culture adopted by me, and followed with complete success for a many years. The plant named has an aversion to a soil too richly impregnated with stimulating properties. It never thrives better than when planted in a soil composed of fresh light earth from a pasture, with a sufficient quantity of sand to make it clear, or work well in the hand. If planted in such a soil, and regularly but moderately supplied with water, it will flower in a most splendid manner, and amply compensate for the extra trouble taken. By the number of shoots it will produce from the stem of the plant it may be readily propagated; these, if kept earthed up closely with fresh earth, will by the end of August, or beginning of September, have become strong well-rooted plants, and may then be taken off, and planted where they are intended to flower in the ensuing season. This simple process I have found much better than cutting or piping. After having severed the newly formed plants from the parent plant, I immediately throw the latter away, so that my plants are never more than one year old, and consequently in full vigour, throwing up their flower stems with great strength, and displaying an intensity of colouring in the petals which is quite dazzling to the eye. Should you consider these remarks worthy your notice, they are at your service.

OBSERVATIONS ON GLAZING HOTHOUSES, PITS, &c.

BY MR. J. SEYMOUR, KITCHEN GARDENER TO THE COUNTESS OF BRIDGEWATER,

ASKRIDGE PARK, GREAT BERKHAMSTEAD, HERTS.

The glazing of horticultural buildings is a subject well worthy of discussion amongst gardeners, there being few subjects of so great importance upon which so much diversity of opinion exists. some old gardens there are several different modes of glazing to be found, both as regards the shape, and also the size of the panes; some gardeners are great advocates for large panes, as allowing a greater admission of light than smaller ones, in consequence of the less frequent occurrence of laps; but, for various reasons, I am not favourable to the use of large panes. In the first place, they are more likely to be broken in moving the lights when giving air, and also by frost and hail storms; and it will be evident that when one is broken, a much greater amount of cold air will be admitted, besides costing more to repair it, than if it had been of smaller dimensions. Suppose a vinery or peach-house to be glazed with panes ten inches deep by seven wide, the laps at bottom left open, it will be found that after a severe · winter, many of the panes will be split up the middle; and these, when taken, can only be fit for patching, which at all times, and in all plant structures, has a very unsightly appearance. I have had a vinery glazed in this manner under my charge, and well know the great inconvenience which I have always found resulting from the use of large panes. I have frequently thought, that in horticultural establishments, there should be three or four regular sizes adopted in glazing the various structures. For instance, suppose the largest size used for hothouses, vineries, &c.; the next size for pits used in growing melons, cucumbers, pines, &c.; a smaller size for ordinary frames; and the smallest for hand glasses. By thus arranging the sizes of the panes, a considerable saving of glass will be effected. In many gardens it will be found that the vineries and pits are glazed with panes of the same size, so that when by some cause any of the panes come to have a corner broken off, on being removed, they could not be used in the pits, on account of the latter being glazed with panes of the same size; whereas, had they been a trifling degree smaller, it is probable that they would have done well to repair any damage in the pits, without much loss of glass. Again, supposing a regular repair was going on in any one of the vineries, a great many of the panes will be found blemished, and not in a fit state to be retained. In this case, many would be found large enough for repairing the pits and frames; and at the same time, the least possible amount of loss would be sustained. When a general repair is going on, the glazier ought to begin with the largest size first, and work

down to the smallest; and not, as is frequently the case, cut up a large piece of glass to replace a small broken pane.

In my opinion, there are no better sized panes for hothouses than seven inches wide by four and a half deep; for pits, four and three quarters by three inches deep; and for frames, four by two and a half inches deep, and with a lap of one-eighth of an inch; the glass to be clear, stout, and selected as true as possible, so as to lay perfectly level one upon the other. The panes must be cut so as not to fit tight against the ribs (a practice too common among glaziers,) but they should have room left for the ribs to swell and expand. In glazing a light, all the panes should be first laid in loosely, and fitted so that they lay perfectly easy and quite flat, as well as range one with the other: when this is done, the panes must be taken out, and some well-worked putty laid in the rabbett; the panes must then be replaced in the same order, and pressed firmly down, the bottom one being embedded in the putty, so as not to leave a vacuity.

In the spring of 1838, we had occasion to rebuild two old metallic vineries, which was done by Messrs. Barwell and Co., of the Eagle Foundry, Northampton. They were glazed with panes four and three-quarter inches by three inches, being selected of perfectly level glass, direct from the glass house, packed in boxes that contained about five hundred each, and put in by the glaziers, as I have described above. There are three tier of lights on the roof; the two bottom ranges, and the corner ones of the top range, are secured down with pins and putty; all the other top lights are moveable, and managed by a windlass; the front sashes are hung with hinges, and open outwards, the extent of which is regulated by means of iron rods, placed with holes attached to the sashes, and by which they are fastened by iron pins, fixed in the front plate: one corner of each sash is taken off, for the purpose of taking the vines in or out when necessary, and there is a piece of cast iron made to fit these corners, fastened by screw nuts, to keep the stems of the vines in their places. The doors are made of wood, as they are better to keep in order than iron ones, and easier and better to open. The houses are heated by flat hot-water pipes. The roof of these vineries contains about nine thousand two hundred and sixteen panes; the two ends and partition, one thousand five hundred and seventy-nine; and the front sashes, one thousand nine hundred and twenty; with three doors, which contain each twenty panes, five inches wide by seven deep, making a total of twelve thousand seven hundred and thirty-five panes. From the spring of 1838 to the present time, (October, 1841,) there has only been ten panes broken in the roof by the frost, &c., and twelve in other parts by accidents. These houses require shading in clear sunny weather.

In November, 1838, having several of our lights thrown off a pine pit, by a strong gale of wind, one especially was so very much broken, that I had it re-glazed with panes seven inches wide by four and a half deep; the lap one-eighth of an inch, and bedded as I have recommended. This light contains one hundred and thirty-two panes, and is in constant use, being a bottom light, beneath which I have kidney beans on the flues all the autumn, winter, and spring, so that it is very frequently moved; but notwithstanding this, from that time there has only been two panes split by frost, and one by accident. These lights were before glazed with panes seven inches by eight and a half, and an open space of a quarter of an inch left between the laps, with a view of letting out the condensed steam that ran down the The sacrifice of glass by frost was very considerable, on account of the water congealing between the panes; besides which, the admission of cold air was very considerable. I have since had the whole of the bottom panes taken out, cut in two, and bedded in putty, so that I seldom have any broken by the frost. I find this method greatly strengthens the glass, and prevents many accidental breakages. I hope to see many of your correspondents take up this interesting subject, and communicate the result of their observations. I should also be much gratified by seeing some suggestions regarding the handles and fastenings of hothouse lights, almost every gardener having some plan or idea peculiarly his own.

[We are very much obliged to our respected correspondent for this paper, and we hope to see others follow, on a subject which is of so great importance to gardeners. Perhaps some of our readers will also be kind enough to favour us with an account of their modes of securing and moving garden and hothouse lights; in the mean time we shall be most happy to hear again from our correspondent.)—ED.

REFERENCE TO PLATE LXVIII.

MIMULUS M'LANII, Mr. M'Lane's Monkey Flower.

NAT ORD. SCROPHULARIACEA. CLASS DIDYNAMIA ANGIOSPERMIA.

This is a hybrid raised in 1839, by John M'Lane, Esq., of Herald's Cross, Dublin, from seeds of M. Harrisonii, fertilized with the pollen of M. cardinalis; the stock was purchased from its originator by Mr. Davis, of Hillsborough, and by him sent out to the public; it is now becoming plentiful. Our figure was taken during the summer from a plant in the possession of Messrs. Dennis and Co., Nurseryman, King's Road. It is a profuse bloomer, and like its parents, well adapted for planting out in summer; a somewhat shady situation should, however, be provided, as its brilliant colours are liable to fade when exposed too fully to the sun: a moist situation should also be provided it.



an ymil Chroniai

NOTICES OF NEW PLANTS.

GESNERA DISCOLOR, Varnished Gesnera.

Rot. Reg.

NAT. ORD. GESNERACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This species of Gesnera was exhibited by Messrs. Young, of Epsom, at the two first exhibitions of the Horticultural Society in the present season. It is an herbaceous plant, with very large cordate leaves, the lobes of which overlap at the base; they are smooth and shining on the upper surface, and hairy beneath. The flowers are dispersed in a large leafless panicle, whose branches are of a deep purple colour, and which, together with the flowers, are shining, as though they had been varnished; the individual blossoms are nearly two inches in length, cylindrical, and of a light vermillion red colour. It is reported to have been introduced from Brazil, The treatment of the plant under consideration, does not differ from that given to other South American species. In the autumn, when the leaves and stems are decayed, the pots containing the roots should be removed to a warm and dry position, where their natural season of repose will be imitated. In the spring, when they evince signs of growth, they must be removed to the moist stove and re-potted, and liberally supplied with water. It is a mistaken notion to place plants of this habit in a cold temperature when at rest: such a mode of treatment not being in accordance with that they receive in a natural state.

DIPLOLÆNA DAMPIERI, Dampier's Double-cup.

Bot. Reg.

NAT. ORD. RUTACEÆ. CLASS POLYANDRIA MONOGYNIA.

A singular plant, from the Swan River, of which great expectations were raised on its introduction; the absence of colour in the flowers, however, renders it unfit for cultivation for ornamental purposes, so that it can only be regarded as a botanical curiosity: in every thing, except beauty, however, it is extremely interesting, for it is botanically allied to Correa and Boronia, without any external resemblance to those plants. The arrangements of the parts of the flowers are similar to those in Composite genera, whilst it has no affinity to them; it is moreover, an apetalous genus amongst polypetalous ones. Within the involucrum the flowers are pressed so closely together, that no room is left for the development of calyx or corolla, as separate organs, these parts are consequently reduced, to mere scales, from which the stamens (from ten to fifteen in each flower,) project to some distance. It is a robust greenhouse shrub, and flowers in the early part of the summer.

ERIA CONVALLARIOIDES, Close-headed Woolwort.

[Bot. Reg.

NAT. ORD. ORCHIDACE & CLASS GYNANDRIA MONANDRIA.

This plant has been already noticed at page 89 of the present volume. From the plate now given, it appears to be rather an interesting plant, though less beautiful than was anticipated on the examination of dried specimens. It has been flowered both by Mr. Rogers, and Messrs. Loddiges. "The specific name Convallarioides is by no means well applied, alluding to the form and not the smell of the flower; in the first respect, there is very little resemblance to the Lily of the Valley, and in the second, none at all."

ARCTOSTAPHYLOS NITIDA, Shining Bearberry.

Bot. Mag.

NAT. ORD. ERICACEM. CLASS DECANDRIA MONOGYNIA.

An extremely beautiful shrub, raised by Mr. Mackay, at the Dublin College

Botanical Garden, from seeds sent him five years ago from Mexico, e regione frigida. A more desirable plant has not been introduced for a long time to our collections, and we have great hopes it may prove hardy certainly the slight protection of a frame will defend it from our severest cold. It is a graceful shrub, with glabrous erect branches, and oblong lanceolate alternate leaves, acute at both ends, dark green above, pale and glancous beneath. The flowers are produced on a compound or paniculated raceme, almost pure white, the limb with five blunt spreading teeth. It was found by Andrienz, at Toluca.

HEIMIA SALICIFOLIA, VAR. GRANDIFLORA, Large flowered Heimia.

[Bot. Reg. NAT. ORD. LYTHRACE E. CLASS DODECANDRIA MONOGYNIA.

The plant of which this is supposed to be a variety, though introduced some years back is rarely seen in collections. Without much beauty, either in its flowers or its habit of growth to recommend it, its cultivation seems to have been disregarded, although when well treated, it certainly assumes a more ornamental appearance than that in which it is usually found; the variety differs, in having larger flowers, and long drooping branches, and has been flowered at Sion House, where it was sent by Captain Herbert, who found it on the Pampas of Beunos Ayres.

KREYSIGIA MULTIFLORA, Many flowered Kreysigia.

| Bot Mag.

NAT. ORD. MELANTHACE E- CLASS HEXANDRIA MONOGYNIA.

A pretty half-hardy herbaceous plant, native of the Illawara district, in New South Wales, where it was discovered by the late Mr. Allan Cunningham, and introduced to the Royal Gardens at Kew, in 1823. From the axils of the leaves arise the peduncles supporting the flowers, which are composed of six obtuse sepals, of a light rose colour; these continue in perfection for some time, and are succeeded by somewhat pear-shaped, three-celled capsules, each cell containing one perfect seed.

CYRTOCHILUM FILIPES, Thread stalked Curvelip.

Bot. Reg

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A native of Guatamela, whence it was received by Mr. Bateman, and subsequently by the Horticultural Society, from Mr. Hartwee. It has a very slender stem, above two feet long, perfectly simple, on the extreme point of which are four or five flowers; these, in consequence of being yellow, have the aspect of an Oncidium. It is not necessary to keep this species in so hot a situation as some West Indian Orchidacca; nevertheless, a temperature considerably above that of a greenhouse, is indispensable. It delights in brown turfy peat, and may either be grown in a pot, or suspended from the ratters. It requires but little water whilst dormant. The following species of Cyrtochilum are cultivated in this country:—C. maculatum, graminifolium and filipes, from Mexico; C. flavescens, and stellatum, from Brazil; and C. mystacinum from Peru. The following are known, but not yet introduced:—C. undulatum, flexuosum, and ixioides, from New Grenada; C. pardinum and volubile from Peru.

CEONIUM CRUENTUM, Bleeding Stoneleek.

Bot. Reg.

NAT. ORD. CRASSULACEÆ. CLASS DECANDRIA DECAGYNIA.

Owing to unsatisfactory distinctions between the old genera Sedum, and Sempervirum, Mr. Webb, in his work on the Canaries, has remodeled them, and separated from them three groups, to which the names of Æonium, Aichryson, and Greenovia, are severally applied. Of those referred to, Æonium,

one "which may be regarded as the precursor of the genus," is the Sempervirum arboreum, which occurs farthest to the northward. Three others are from Madeira, viz., S. glandulosum, and glutinosum. The rest are from the Canaries, and include, S. Smithii, barbatum, villosum, ciliatum, eccepitosum, Haworthii, urbicum, and canariense. H. cruentum, is found on the stones and bare rocks of the ancient cavern of Tigalate, near the base of the Pine region of the isle of Palma, on the road from Mago to Fuencaliente. It was named in allusion to the streaks of crimson on its leaves, and from the wounds which Messrs. Webb and Berthellot received from an accident in the neighbourhood of the basaltic rocks where it grows. It was raised some years ago at the Mulford Nursery, from seeds sent from the Canaries, by Mr. Webb.

BOSSIÆA DISTICHA, Double-rowed Bossiaa.

Bot. Reg.

NAT. ORD. LEGUMINACEE. § PAPILIONACEE. CLASS, DIADELPHIA DECANDRIA.

A pretty Swan River shrub, raised from seeds presented to the Horticultural Society, by Captain James Mangles, R.N. Its habit is erect, with small ovate obtuse leaves, and large flowers of a pale yellow, marked with crimson about their base. The nearest affinity of the species is with Mr. Bentham's B. eriocarpa. It requires the same kind of treatment as other species of the genus,

ECHINOCACTUS CORYNODES, Many-flowered Echinocactus. [Bot. Mag.

NAT. ORD. CACTEÆ. CLASS ICOSANDRIA MONOGYNIA.

A very handsome species, with rich sulphur coloured flowers, with a red eye; they are about two inches in diameter, produced in a cluster of several from the crown of the plant, the form of which latter is sub-globose, rather depressed at the top, and narrowed at the base; of a rather dark and somewhat glaucous green, "the sides being cut into about sixteen deep vertical furrows, and as many prominent crenated ridges; the crenatures from half to three quarters of an inch apart, and in them is lodged a tuft of dense white wool, from amongst which arise the aculei, in number from seven to nine, spreading and rigid, of a uniformly deep brown colour." The plant has bloomed in the rich collection of Cacteæ, at the Royal Botanic Garden at Kew, during the summer.

FRANCISCEA LATIFOLIA, Broad-leaved Franciscea.

Bot. Mag.

NAT. ORD. SCROPHULARIACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This most beautiful species of Franciscea was raised from seeds gathered by Mr Tweedie in South Brazil, and received by Mr. Moore, at the Glasnevin Botanic Garden, near Dublin, through the medium of the Earl of Arran. According to Pohl, it inhabits Tijuca, near Rio Janeiro, whence living plants were introduced to the Botanic Garden of Schoenbrunn. In a letter, dated Oct 4, 1841, Mr. Moore writes, "I am glad to state, that I think the glowing descriptions given of this plant, both by the Earl of Arran and Tweedie, will be fully realised. My large plant is in fine condition, and shewing abundance of flowers, having from two to four together; and I do not despair of seeing from thirty to forty blossoms on it at one time, during the ensuing month. I have kept it cool and rather dry in an airy greenhouse during the summer, finding it nearly deciduous, and requiring a little rest. Shortly I shall remove it into a cool stove, where I cannot doubt it will flower freely." Nothing can exceed the brilliant violet purple of the blossoms. "The genus Franciscea was established by Pohl, in honour of Francis I., Emperor of Austria; and from the great beauty of many of the species, and eminently so of this, it is well worthy of bearing the name of a Sovereign who was so distinguished a patron of botany.'

LASIOPETALUM MACROPHYLLUM, Large leaved Lasiopetalum. | Bot. Mag. NAT. ORD. BYTTNERIACE.E. CLASS PENTANDRIA MONOGYNIA.

A new and distinct species, raised from seeds sent from New South Wales, to the Botanic Garden, Edinburgh, in June, 1835, by the late Mr. Richard Cunningham. It is an erect shrub, with long broad hispid foliage, with corymbs of flowers opposite the leaves. The calyx greenish-white, and the petals very minute, of a purple colour, and alternate with the segments of the calyx. It flowered for the first time in May, 1841, having been kept in a greenhouse.

PREPUSA HOOKERIANA, Scarlet and White: flowered Prepusa, [Bot. Mag. NAT. ORD. GENTIANACE.E. CLASS HEXANDRIA MONOGYNIA.

A singularly beautiful herbaceous perennial, found in the Organ Mountains of Brazil, by Mr. Gardner, who thus describes it:—"This beautiful species of Prepusa inhabits the summit of the Organ Mountains, at an elevation of 6,857 feet above the level of the sea; growing in patches in moist exposed places, flowering in March and April. It is the third species of the genus that has been detected, and was one of the many discoveries that resulted from a visit of six days to the summit of the Organ Mountains, in the month of March of the present year (1841); and it is with pleasure that I dedicate it to my kind friend and patron Sir W. J. Hooker, as the most lasting memento I can offer him, for his first suggesting my voyage to Brazil, his liberal assistance in enabling me to undertake it, and his unremitting kindness during my absence, in directing my attention to such places and objects as were most likely to advance that science to which we were both so devotedly attached." Mr. Gardner was fortunate enough to bring home living plants, which have been sent to the Botanic Gardens at Kew and Glasgow, and other establishments.

ALSTRŒMERIA ERREMBAULTII, Errembault's Alstræmeria. | Botanist.
NAT. ORD. AMARYLLIDACEÆ. CLASS HEXANDRIA MONOGYNIA.

This is a hybrid first raised in the Belgium Gardens; its flowers are about three inches in length, and two and a half inches in diameter; the interior, white, more or less painted with a delicate rose pink colour, and beautifully spotted with purple, or short purple streaks, the apicula a delicate green. It was flowered by Mr. Scott, gardener to C. Barclay, Esq., of Bury-hill, near Dorking.

PORTULACA THELLUSONII, Thelluson's Portulaca.

Botanist.

NAT. ORD. PORTULACEÆ. CLASS DODECANDRIA MONOGYNIA.

This is a truly brilliant plant, and when in bloom its crimson flowers are peculiarly attractive. It was at first supposed by Dr. Lindley to be an hybrid, between P. grandiflora, and P. Gilliesii, but subsequent observation has found is to be a true species. It is most probably a native of tropical America, that country containing most of the species of the genus, few being found in the temperate, or warm parts of the old world. According to Dr. Lindley, it was sent to the London Horticultural Society, from Florence, by Lord Rendlesham. The plant is of easy cultivation; but is of short duration.

GREVILLEA SERICEA, Silky Grevillea.

Botanist.

NAT. ORD. PROTEACEÆ, CLASS TETRANDRIA MONOGYNIA.

This is an old inhabitant of our gardens, having been introduced about 1790. It ranks amongst the most ornamental species of this not very attractive genus, and being a plant of handsome growth, it possesses at all times, even when not

in flower, a certain degree of interest; though introduced about fifty years ago, it is not commonly seen in collections.

RHODODENDRON GIBSONII, Mr. Gibson's Rose-bay.

Pax. Mag.

NAT. ORD. ERICACEÆ. CLASS DECANDRIA MONOGYNIA.

This beautiful species was discovered by Mr. J. Gibson, on the summit of the Khoseca Hills, in the East Indies, at an elevation of upwards of 4000 feet above the sea; it; was seen growing in thickets, and assuming the character of an undershrub, flourishing in soil composed chiefly of loose granite and sandy loam, much interspersed with masses of rock. The plant has alternate ovate-lanceolate foliage and large whitish flowers, tinted with pink, and spotted with yellowish brown'on the lower part of the top segment. Its habit and foliage are somewhat novel among Rhododendrons, and approximate more nearly to those of some Azaleas; the form, disposition, and hairiness of the leaves, in the young lateral shoots, much resemble the same features in most of the Indian Azaleas; the flowers are, nevertheless, decidedly those of a Rhododendron, and for their size, delicacy of tint, and the fine spotting in their upper segment, are almost without a rival.

Cultivated in this country, it assumes a somewhat more erect habit than in its native soil. It thrives well when potted in a compost of sandy fibrous loam, mixed with one-third or a fourth part of heath-mould, and submitted to the treatment usually given to greenhouse Rhododendrons; cuttings of the young or half ripened wood root freely in sandy soil. Being a plant of unquestionable merit, Mr. Paxton remarks "we have selected it to commemorate the services of the individual by whom it was collected.

COLEUS BARBATUS, Bearded-flowered Coleus.

Pax: Mag.

NAT. ORD. LABIACEÆ. CLASS DIDYNAMIA GYMNOSPEŘMIA

A tender greenhouse or stove plant, producing an abundance of violet blue flowers. It grows to a foot or eighteen inches in height, producing many stems, or principal branches, which have an inclination to recumbency, curving upwards again at their extremities; the flowers are borne in whorls of six, on a long spike, and a considerable quantity are opened at the same time. It is said to have been introduced from Abyssinia in 1806, but it is also a native of various other parts of India, such as Mysore, Bangalore, Nepal, &c. where it is found in mountainous districts. It is synonymous with Plectranthus barbatus.

WITSENIA MAURA, Dark-flowered Witsenia.

Par Mac

NAT. ORD. IRIDACEÆ CLASS TRIANDRIA MONOGYNIA.

Plants of this species were first sent by Masson, in 1790, from the Cape of Good Hope, to Kew Gardens; it blossomed originally at Messrs. Lee's, of Hammersmith. Its cultivation has always been very limited, and lately it has disappeared in the majority of collections, being now in few of the metropolitan nurseries except Messrs. Low's, of Clapton.

"In its manner of growth it is not unlike W. corymbosa; the stems are, however, much stronger, the leaves thicker and larger, and confined more to the summit of the stem, whilst it attains a greater average height, and is less bushy. The flowers are, nevertheless, its most remarkable features; they proceed in pairs from imbricated sheaths at the apex of the stem, and have a peculiarly long tube, which is green on the lower part, and gradually merges into a blackish purple at the top; from this colour, the specific name is applied. The limb of the flowers is bright yellow, but, as far as we are able to determine, the lobes

never expand, but remain in a closed state, with the germen and style, protruding slightly beyond. With regard to cultivation, it should be potted in a soil composed chiefly of turfy heath-mould, to which may be added a little open loam and sand. The plant must on no account be over-potted; and particular caution is requisite to preserve it from superfluous moisture, which, if allowed to collect, either in the air or about the roots, inevitably kills it."

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

CLERODENDRON SPLENDENS.

A beautiful climbing plant, inhabiting the woods of Sierra Leone; its foliage is of a deep rich green, and the flowers of a colour not inferior to that of the Euphorbia splendens. It will be a stove plant, but one of the handsomest in the country. It has flowered with Mr. Knight, of the King's road, where it had been sent by Mr. Whitfield.

POTHOS PODOPHYLLUS.

A fine species received amongst other plants from Mr. Lavater, a gentleman residing near Vera Cruz, and near whose residence Mr. Hartweg, in landing on his mission from the Horticultural Society, was rewarded by the discovery of the rare Berberis tenuifolia, Cyrtochilum maculatum, and Brassavola glauca, all at that time new. The Pothos has leaves with a stalk a foot in length, and a circular blade more than a foot in diameter, divided into seven deep pinnatifid or entire acuminate lobes. They are of a firm texture, of a sea green colour, and but little marked by veins except the midrib.

CŒLOGYNE CORONARIA.

A pretty species of this interesting genus, with very pale greenish yellow flowers, whose lip has a yellow centre, and a border beautifully streaked, and spotted with crimson. Found by Mr. Gibson, in the Chirree district of the Khoseea Hills of India.

ERIA BIPUNCTATA.

Found also by Mr. Gibson, in the same locality as the last, and flowered with it at Chatsworth.

CYRTOCHILUM GRAMINIFOLIUM.

Resembles C. maculatum in habit, but has a yellow lip in the form of a wedge, with rounded angles. It has flowered with Messrs. Loddiges, who imported it from Oaxaca. It is nearly allied to C. filipes.

PLEUROTHALLIS PICTA.

A Mexican species, with purple flowers, arranged in a spike about one-third the length of the leaf. It is very near P. strupifolia and aphthosa.

DYCKIA ALTISSIMA.

A pretty greenhouse plant, a native of Buenos Ayres, with a flowering stem six feet high, and slender, but the leaves are barely a foot long; the flowers resemble those of D. rariflora, but are less brilliant. Sent by Mr. Tweedie to the Glasgow Garden, and flowered in that of the Horticultural Society in October, 1841.

MISCELLANIES.

BURLINGTONIA RIGIDA.—Most Orchidaceæ that are remarkable for their strictly epiphytal character, and for sustaining themselves solely on atmospheric supplies: receive the popular name of air plants; but there is usually a grossness and succulence in their stems, leaves, and roots, which foster the idea that these are themselves the reservoirs of nutriment, and diminish the seeming singularly of the manner in which they are sustained. To no plant does such a notion sppear more inapplicable than to the present subject of remark. The smallness of all its parts, and the comparatively gossamer uature of its roots, most efficiently confirm the opinion, that it is constantly dependent on the air for its existence, and render it more like a thing of romance, than an actual member of the vegetable kingdom.

In Messrs. Loddige's collection, there is a specimen of this beautiful plant, which has attained a considerable size and perfection; its mode of growth may be worthy of a brief description.

The plant, consisting of several pseudo bulbs, is growing in a pot filled with heath soil and potsherds, and from each of the pseudo bulbs, a long, rigid, wire-like stem ascends, developing a new bulb at its summit; and from around the base of this bulb, a quantity of roots depend, which are very little thicker than a strong thread, of great length, most pleasing diversity of form and direction, and a snowy whiteness. Each year another stem arises, above the last formed pseudo bulb, again producing a new bulb, and attendant roots at its apex; and, as these stems are attached to a barrel-shaped wire trellis, the effect of the whole is, in the strongest degree delightful. When the specimens stain an age and condition suitable for flowering, the scape is protruded from the sheath, which envelopes the base of the youngest pseudo bulbs, and rises erectly for four or five inches, being yet more gracile than the stems, and bearing near its summit, three, four, or more large pinkish white blossoms. These are expanded about the month of April, and continue open many weeks.

No particular treatment is demanded. The best way of managing it, however is to place it in a wire basket, containing sphagnum, moss, and potsherds, and suspend it in the lower part of the house; if hung too high, it will lose much of its interest. It must be kept in a moist, warm, shaded house, while growing, and in a more moderate temperature and drier atmosphere during winter. It can be propagated by severing the stem just below the uppermost pseudo bulb, and treating the latter as an independent plant.—Magazine of Botany.

We have lately been informed by Mr. Mackay, of the College Botanical Garden, at Dublin, that he has raised from seeds several plants of Statice grandiflora, which he identifies with S. Dickinsonii, lately figured in this work.

MYOSOTUS PALUSTRIS.—This plant is a general favourite, and not undeservedly so, if elegance of form, and brilliancy of colour, are entitled to favour; indeed, its beauty is so striking as to have acquired for it, the proverbial name, "Forget me not," and it may be readily assumed, that few persons who have seen the flower are likely to forget it. It is a perennial, growing in the water, at the margins of ponds, and by the sides of rivers and ditches; where it blooms in July and August.

The following are some of the best Roses exhibited by Messrs. Lane and Son, at the Horticultural Society's Rooms, on the 5th of October:—

CHINA.

La Camoens—Light blush.

Beau Carmin—Bright crimson.
Pulchella—Small, deep pink, very double
Abbe Moulard—Deep rose.
Capt. Parry—Deep pink.
Gabrielle—Bright crimson.
Theresia Stravius—Pale flesh colour.
C ramoisie Eclatante—Carmine.
Countess de Grillion—Light pink.
Fabvier—Crimson.
St. Peru—Deep crimson.
Archduc Charles—Deep rose crimson.
Cramoisie Superieure—Crimson, very double.

TEA SCENTED.

Eliza Suavage—Creamy, salmon centre. Goubault—Salmon colour. La Pactole—Sulphur, deep centre.

NOISETTE.

Euphrosine-Pale creamy pink.

Jaune Despres-Nankeen.
PERPETUAL.

Bernard-Bright pink.

HYBRID PERPETUAL.

Lady Fordwich—Brigh rosy puce.
William Jessie—Large pinkish rose.
General Allard—Large light puce.
Queen Victoria.—Deep bright rose.
Madame Laffay—Rosy puce.

Comte de Paris-Very deep crimson. Meus-Deep crimson, semi double.

ISLE DE BOURBON.
Augustine Margat.— Bright rose.
Augustine Lelieur.— Deep pink.
Emily Courtier.— Crimson.
De Nieuilly—Large bright rose.

Boquet de Flore—Deep pink, very double Phonix—Rosy crimson. Queen of Bourbons—Salmon colour. Madame Despres—Rose, very large and

double.
Armosa—Pink.

Therisita—Bright pink, very double. Boulogne—Deep pink, small.

ALSTREMERIA.—This is not a tribe of plants very difficult of culture; many of the species require no protection, and may be planted out of doors, against a south wall, or in front of a greenhouse, provided the soil is both light and dry. In such a situation the following species have stood the severest of our winters, in the Birmingham Botanic Gardens, without having so much as a leaf injured. A. acntifolia, pulchella, versicolor, tricolor, psittacina, and Hookerii; the only protection there employed was to keep the soil well loosened on the surface. All the species may be propagated by division, but the best plants are raised from seeds.—Botanist.

The modern garden does not require so many single statues, as the ancient geometric garden, where the end of every avenue, every niche, the centre of every square, or circular form, had a figure of some kind or another, without particular attention to their execution as works of art, because they were obliged to have so many. Pan reposing on a rock, by a brook in a forest, playing on his seven reeded pipe; a nymph bathing in a stream under an overhanging rock, situated in a recluse and lonely thicket, a faun espied by a nymph, all these might certainly be placed in the garden: but all other figures should be either in temples, or in other buildings, particularly when they are valuable as works of art; and no statue should be permitted in the modern garden, without the situation in which it is placed be particularly adapted for its character, and the statue itself remarkable for its beauty.—Schell.

VICTORIA PARK.--Preparations are now making by Government for the commencement of this Park. The Commissioners of her Majesty's Woods and Forests have visited the site, and Surveyors are diligently occupied in preparing the plans. The Government plan has also just been published, which leads to the expectation that this will be one of the most ornamental spots in the immediate neighbourhood of the metropolis. The two sides of greatest extent are well defined in their boundaries, by the Regent's Canal, and Sir G. Duckett's Canal. There will be four principal openings into the Park, which will only be crossed by one public road, being the line of traffic between Mile-end-road and Well-street, Hackney, which will be separated from the Park by iron railings, and closed at night by gates. There will be two carriage-drives, one extending in a serpentine form, around the Park, and the other a lesser drive.

ANTS.—I saw in your paper of last week, a lady wishing to know how to destroy ants. I once had a large Pelargonium in a pot, which was infested with ants, so much so, that it was in a dying state. I frequently watered it, thinking that it would drive them away, but it was of no avail; at last I was induced to try camphor, which I broke very small, and placed on the top of the mould, and watered it as usual, when they soon quitted their abode; after which I potted the plant, and it grew as well as ever.—A Young Garderer.—Gardener's Chronicle.

The following are recommended by Mr. C. Knight, in the Gardener's Chronicle, as first rate new Dahlias:—

Eclipse, (Widnall.)
Garrick, (ditto.)
Tournament, (Catleugh.)
Uxbridge Magnet, (ditto.)
Haidee, (Wildman.)
Bridesmaid, (Brown.)
Maid of Bath, (Davis.)
Admirable, (Sparey.)
Unique, (Walter.)

Conqueror of the World, (Stein.)
Highgate Rival, (ditto.)
Queen of Roses, (Thompson.)
Burnham Hero, (Church.)
Mrs. Barckley, (Willmer.)
Scarlet Defiance, (Cousin.)
Fanny Keynes, (Keynes.)
Indispensable, (Girling.)
Euclid, (Ward.)

In answer to query at page 213, on Camellias, in a private dwelling-house, I beg to suggest that shading or screening from the sun be entirely dispensed with, in order that the wood and buds may be perfectly ripened; at the same time observing, when the young wood begins to assume a brownish appearance, to gradually reduce the supply of water, so that when the wood gets to maturity, to water but seldom: never at any time allowing the plants to flag, and when the flower buds begin to swell, gradually to increase the supplies, so that they may be freely watered when in bloom.

August 30th, 1841.

J. PLANT.

QUERY.—Can you or any of your correspondents furnish me with a list of 70 of the best Dahlias, and also the names of those which have taken the most prizes this season. I am a small grower, and have been in the habit of purchasing those new kinds which have been represented as first-rate; but when the time of blooming has arrived, I have too frequently found them to be altogether worthless; and it is much to be regretted that so many seedling kinds should, year after year, be sent out with high sounding names and a long price, not one in twenty of which are worth growing the following season.

A CONSTANT READER.

[Some of our readers who are acquainted with the leading kinds of Dahlias, will perhaps supply the information required by our correspondent, in the meantime we would remark, that as far as Seedling kinds are concerned, we

do not think them generally to be sufficiently proved to maintain the character they are represented to possess, it too frequently happening that when a good property is observed in a first year's seedling, it is pushed out on the public without another year's trial as to whether those properties would remain constant. We certainly think that at a time when the Dahlia is brought to the perfection which it does now possess, and when so many excellent kinds are in cultivation, no new flower whose merit has not been fully tested, ought ever to be received, and this cannot be done without at least growing the plant two seasons. If this plan were more generally adopted, we should not hear of so many disappointed purchasers.—ED.]

MONTHLY CALENDAR.

FLOWER GARDEN.—Annuals, and summer plants, will have now been destroyed by frost, if not previously removed as directed last month. Where it is not intended to plant bulbs as there recommended, the ground should be trenched up for the winter. The present month is a suitable time to prepare composts for choice flowers: let it be frequently turned over, so as to secure the full benefit of exposure to the atmosphere, by the absorption of nutritious gases. Afford suitable protection to such plants as require it; and in dry weather, let the gravel walks and lawns be well swept and rolled.

PLANT STOVE AND GREENHOUSE.—See the directions of last month. (See also vol. 5, p. 167.) In the hotbeds and pits devoted to the forcing of flowers, light must be admitted to as great an extent as possible, and the temperature kept regular, by means of whatever heating agency is employed.

KITCHEN GARDEN.—In this department, manure and trench, or dig all ground not occupied by crops; sow a few peas, beans, and radishes, in mild weather; earth up those which have vegetated, as well as other advancing crops, and duly protect according to their several natures. (See vol. 5, p. 168.)

FRUIT GARDEN.—All kinds of fruit trees may still be planted in favourable weather; prune also, in mild weather, deferring that operation on stone wall fruits until spring; these may, however, be partially unnailed from the walls.

FORCING GARDEN—In the pine stove, a regular, but moderate temperature must be kept up, both in the tan-bed, and also in the atmosphere of the house; air must be admitted in small quantities, whenever an opportunity offers. In vineries and peach houses, in which foreing has been commenced, too much heat should not be applied at this season, and on no account ought the temperature kept up at night, to be equal to that during the day. Cucumbers, and all other tender plants in hotbeds and in pits, will require good attention in covering; and in the regulation of the dung casings, by which the temperature is maintained, air must also be duly admitted.

PLEASURE GROUNDS.—Effect any alterations or projected improvements in suitable weather.

PARK, PLANTATIONS, &c.—Prepare for planting as directed last month, by draining, feucing, and trenching; plant only in fine weather, excepting large trees, with heavy balls of earth. Thin, fell, and prune deciduous trees, but not the barking kinds. Plash and repair hedges, cut copse wood, grub old stems, &c. Operations on ground, water, &c., may be still carried on.

An early opportunity should be taken to fill the ice house; a provision for the use of the family for some time, may be made by digging a hole in a dry gravelly spot, which may be filled with ice, and protected by a thick thatching of straw.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXVIII.-JANUARY, 1842,

REMARKS ON FORCING THE VINE.

BY R. B. WILSON, NORTON, NEAR STOCKTON.

(Continued from Page 150.)

In my former paper on the subject of forcing vines, I briefly alluded to the operation of summer pruning; -incidental with this, is another equally important one, namely, that of thinning the berries. This is an important feature in the culture of the vine; and on no account ought it to be deferred after the berries have attained the size of early frame peas. In doing this, the smallest berries, and those in the middle of the bunch should be removed. The young shoots are now to be topped back with the finger and thumb, to within two joints of the bunch, and the laterals pinched back to one leaf. Some of my brother gardeners may think that the shoots ought to have been stopped previously to the time I have recommended; but if such should be the case, I beg to differ from them, having found that the berries set better when the shoots are not stopped until after the vines have fairly done flowering, and then gradually pinched back when the fruit is set. The operation of thumb pruning should be performed twice a week, going over the vines, and removing laterals to one leaf, tying the vines regularly to the wires, so that they may enjoy an equal degree of light-light being one of the chief agents of vegetable life. From the time the berries are fairly set, the temperature need not be kept to quite so high a point; from sixty-five to seventy degrees by night being sufficient: by day the temperature may rise to ninety degrees by sun-heat, provided the floors and pathways are kept moist, and a sufficient quantity of air be admitted through the day. The vines should be syringed every morning, using pure soft water, and steaming the houses at night, as the berries are swelling. The border, both inside and outside the house, ought to be frequently watered with manure water. This sort of manure is highly

beneficial to the vine; for, from the weight of its fruit, it requires, during its stages of growth, as great a share of nutriment as any plant I know. But even this, as well as many other points, may be carried too far. As an example, I may mention that of a certain Nobleman's gardener, on the banks of the Tees, whom I had occasion to visit some fifteen months since. The day before I called, he had given one of his vine borders an extra dose of liquid manure, the consequences of which were, that the foliage of the vines was flagging. So much for the abuse of good things. When manure water is used, it ought always to be washed down with pure fresh water. Under ordinary circumstances, it may not be too much to give the inside border a pretty good soaking once in three days,* using liquid manure

*Upon this part of the subject we are disposed to differ from the views taken by our correspondent. We readily admit that very much will depend on the season, the situation, and also the formation of the border; but in the generality of cases, we would not recommend the application of water to so great an extent as our respected correspondent suggests. We confess that we are not altogether prepared to explode our ideas that the shanking of grapes is an evil resulting from excess of moisture in the soil, and from the great depth at which the roots of vines are too often buried. It must be recollected, that in vineries, whilst the roots of the plants are surfeiting in a superabundance of stimulating food, without anything to check their progress, or to deter or restrain them from absorbing the crude juices afforded them in a rich and deep border, the branches and leaves-those parts which Nature has ordained as the laboratory in which the food taken up by the roots is to undergo its course of purification, by respiration and the chemical effects produced by its exposure to light and heat-these are, by a strict and necessary rule, continually and materially lessened, both in number and extent, by the ordinary process of pruning and regulating the branches; the roots being at the same time unchecked in the performance of their functions, it is not unreasonable to infer, that a greater amount of food is taken up, than the remaining parts of the mutilated plant can appropriate, the plant becomes surfeited, its vessels unable to perform their allotted office, and its respiration, by which much of the aquæous matter extracted from the soil is ordinarily carried off, becomes imperfect and partial. To this source we are disposed to attribute nearly all the evils to which the vine, in its culture under glass, is exposed. As far as regards the case of two or more vineries constructed at the same time, and the borders formed of the same materials, in one of which shanking might occur, whilst it was not observed in the other, we think that several causes might be likely to have a share in producing this effect. The power of solar heat would be naturally less at the time the fruit in the late house was ripening, or an excess of rain might fall at the point of time, when, according to our ideas, additional moisture at the roots might be injurious. Such being some of our ideas on this subject, we cannot too strongly impress upon our readers the importance of forming shallow well drained borders of maiden soil for the growth of vines, rather than rich ones of great depth; all the extra support required by the plants could be supplied by moderate applications of liquid manure, at those times when it might be found necessary or desirable. Whilst, however, we are disposed to regard the cause we have named as the foundation of the disease under consideration, as well as

alternately with pure water. The outside border will require less; but at all times it should partake more of a state of moisture than drought. As, however, the fruit advances towards maturity, the water must be gradually withheld, or it will become detrimental to the flavour of the fruit. The syringing of the vines, also, and all unnecessary moisture inside the house must be avoided; and in very fine weather, it is advisable to leave a small portion of air at the top of the house during night. The pruning and regulation of the shoots must not be discontinued; the laterals upon the fruit-bearing branches may be pruned close off, with the exception of the terminal one, which must be retained, to guard against breaking the permanent eyes, for the succeeding year. A few of such leaves as are overshadowing the fruit may also be put aside, in order that the sun and light may be admitted to the fruit, and thereby enhance both its flavour and colouring. After the fruit is become ripe, the admission of pure air must be scrupulously attended to in dry weather, in order to prevent mouldiness or decay, by rendering the atmosphere as dry as possible. For the same reason, slight fires should be made at night; and in damp weather, in order to dry up the moisture: the slight increase of heat will also improve the flavour of the fruit. It may not be improper here to make a few observations upon the shanking of grapes, a disease very prevalent, and upon which much has been said and written by various gardeners, nearly the whole of which differ more or less in their opinions: some considering it is arising from too much heat, others from too rich a border, and not a few from the roots being too deeply buried in a cold and improperly drained border, with many other reasons, both amusing and perplexing. But without at all justifying or condemning the opinions of my brother gardeners, I will humbly add my opinion, acting in so doing under the impression that the subject is an important one. In the first place, any person who knows anything about the shanking of grapes, will allow, that the disease is seldom if ever seen in early forced vineries; neither is it known upon vines on the open walls. It is also comparatively unknown in Scotland, where the air is generally more keen and searching than it is in England. Now, in extensive gardens, where there are

others, we readily admit, with our correspondent, that a damp atmosphere at the time of ripening, instead of alleviating, would materially increase the evil. On the other hand, we have seen the disease in cases where the vines themselves have been in the highest possible state of health, and where a dry atmosphere has been so scrupulously attended to, that during the whole growth of the fruit, no water had been giving internally except by syringing, and this discontinued as the fruit approached maturity, so that no moisture could exhale from the soil, and yet the berries shanked. The roots of these vines were deeply buried in a rich border, and in a somewhat damp situation; and to this, the only apparent cause, we have ascribed the evil.—ED.

three, four, or more vineries, it generally happens that two or three at least are built at one time; the borders, of course, are made at the same time, and of the same materials. If shanking proceed from the borders, how is it that there are no shanked berries in those houses which are forced early, whilst their more unfortunate neighbours, submitted to artificial heat at a later period, are suffering from the How is it that vines planted against the open walls have no bad borders to contend with? And how comes it that in Scotland there are no improper vine borders, amidst its barren mosses, moors, and mists? Is it that the gardeners of Scotland are more enlightened on the culture of the grape than their neighbours? No; but their climate compels them to rely more upon fire heat, and consequently, they keep up a drier atmosphere, which is so essential to the perfect ripening of the grape, after the necessary routine of syringing is discontinued. Of vegetable physiology I know nothing; in fact, I had almost forgotten its name: nevertheless, I think that I have seen enough of the shanking system, to convince me that it proceeds from internal mismanagement. In most cases, I am led to conclude that it proceeds from the atmosphere of the house being kept too moist, especially in the morning, of which the following I think is sufficient proof: - In the first year that I held my present situation, to my no small disappointment, I shanked most of my Muscats and Frontignans. This led me to adopt a new course; and the following season, I gave air half an hour earlier every morning when the weather permitted. The result was, that I had but few shanked bunches; the third season I gave air at seven in the morning in place of eight, and by so doing, I have not a shanked berry about the place. I could adduce other instances, but am not at present at liberty to name the parties. As to wet and cold borders, I think they have no effect in producing the disease; at least, I can mention one place, where the vine borders were lately so much so, as to cause the berries to rust, and yet there has not been a shanked grape about the place. The place alluded to is Edgerston, the seat of W. O. Rutherford, Esq. I have been thus particular about the shanking of grapes, in order to shew distinctly upon what my opinions are founded; regarding the rust, I may at a future period communicate a few remarks on that subject.*

But, to return to my present object, as soon as the fruit is all gathered, the border inside the house should be watered to such an extent, that the water reach the bottom of the border. The vines should be frequently syringed, until they have shed all their leaves; after which they ought to be pruned each spur to a single eye; that

^{[*}We hope our correspondent will not forget his promise.]-ED.

THE FORMATION OF PARTERRES, FLOWER GARDENS, ETC. 173

is, if spur pruning is adopted: and this is, in my opinion, as well as that of many eminent gardeners, decidedly the best method, when everything is taken into consideration.

P.S. When I recommend the young shoots not to be stopped until the fruit is set, it is only the shy-setting sorts that are alluded to.

OBSERVATIONS ON THE FORMATION OF PARTERRES, FLOWER GARDENS, ETC.

BY T. MOORE.

At the present season, many persons will probably be engaged in making alterations, of greater or less extent, in their parterres and flower gardens. The arrangement and disposition of the beds, which hitherto may have given satisfaction, may now cease to do so; or if still pleasing in themselves, may be discovered to be but ill adapted to the situations they occupy, or to be unharmoniously blended with surrounding objects. In either of these cases, if it is decided on to effect some alteration, and to attempt some improvement, the present season of the year is the most convenient for the performance of these and similar operations. We will, therefore, offer a few brief remarks on the subject, in the hope that those who may be in any degree guided by them, may have cause to see that the principles now contended for, have their origin in good taste; and that, if duly carried out, they cannot fail to please.

The kind of flower garden to which we shall most particularly refer, in the present case, is that in which a convenient and somewhat secluded spot of ground is devoted to that particular object, its surface clothed with a carpet of verdure, and studded with beds of flowers, cut in an endless variety of fancy figures. It is usual in the formation of these fancy gardens, to adopt an assemblage of parts forming ornamental figures, and agreeing so far with each other, and the shape and extent of the ground, as to fill out the area, leaving between each part and its nearest associate an open space, varying in its extent according to the harmony of the adjoining parts, and which being covered with turf, forms an agreeable pathway, from which the various and intermixed assemblage of blossoms can be viewed with something like pleasure and satisfaction. Thus far this arrangement may be said to be good; but, as it frequently and generally happens that these parterres are within the range of view from the windows of the mansion, it becomes an object also to provide something, the effect and appearance of which will be pleasing, when seen from such a position. Now, a formal, or it may be a geometrical assemblage of figures, disposed in the manner above described, cannot be said to

have a pleasing effect, when viewed from the position now referred to. It is true, that when looked at from the top of the mansion, or some other elevated and adjoining spot, where the eye can without difficulty trace the outline of the various beds, something like a pleasing emotion will be raised, especially if due attention has been paid to the regular disposal of heights and colours in planting the various kinds of flowers; but it must be remembered, that when a person is standing on a level, or nearly so, with the object of view, he will, when the beds are filled with growing plants, be unable to trace, at least, by far the greatest portion of them. The result of this will be, that the whole assemblage will have an anomalous and heterogenous appearance, without any relief to the eye from the carpet of turf; and therefore, however ornamental in themselves the figures may be, they will from this cause, when pointed out, be certain to fail in affording the satisfaction sought from them.

There is only one way in which this evil can be fully and satisfactorily remedied; and that way we will now endeavour, as briefly as possible, to point out. Instead, therefore, of choosing an intricate assemblage of parts, forming a figure which will occupy nearly or quite the extent of the ground, let several open and wide spaces, or glades of grass be marked out, and these should be carried to the greatest possible extent, in as many directions from the windows, or any other point of view, as can be provided. On the parts of the ground thus left unoccupied should be formed the beds, or parts of the figure which may be chosen or adopted; and in designing the latter, especial reference to the provision of several of these glades should be kept in view: the effect of this, if a figure be judiciously chosen, will be quite as ornamental when viewed from an elevation; whilst from the windows, or any other position nearly on its own level, a pleasing relief to the eye will be afforded, by the interposition of the grass between the masses of flowers. The latter will be more ornamental and conspicuous, in consequence of being more clearly defined; and the whole will, by its pleasing variety, blended with harmony, be rendered much more satisfactory than it would be in its former multifarious and confused disposal.

The same remarks apply to terrace gardens of any extent, when formed with gravel walks intervening between the beds, and also to assemblages of flower beds, in any open space on lawns. In this latter position, nothing can be better than the adoption of any required number of circles, varying both in diameter, and also in situation. These are much easier to fill with ornamental plants, than beds having long and pointed corners; and when arranged in a judicious manner, have an infinitely better appearance: in these, as in other cases, however, they must not be crowded together, the relief

afforded by the intervention of a moderately extended space of grass being more than a counterbalance for the space which it may be argued would be lost, for the culture of flowers.

In the kind of terrace garden to which this paper bears especial reference, as well as in the assemblages of circular beds just referred to, a considerable opportunity exists to provide situations for standard and pillar roses, vases, and rustic baskets of flowers, at the open spaces formed by the angles of the beds; these opportunities the gardener should avail himself of, to as great an extent as the nature of the situation, or adjoining objects may seem to admit.

REMARKS ON THE CULTIVATION OF NELUMBIUM SPECIOSUM.

BY NORMA.

The Nelumbium is a native both of the East and West Indies, China, Cochin-China, Japan, Persia, and some parts of the Russian empire. In Japan it is considered as pleasing to their deities, and frequently the images of their idols are drawn sitting on its expansive leaves. In China also it is highly valued, and held sacred; it there grows spontaneously, flourishing and abounding in muddy marshes, and frequently covering the ponds, which have a beautiful appearance when it is in flower. It was introduced to England in 1784, by Sir Joseph Banks, and after being cultivated for a long time, it was first flowered by Mr. Liptard, at Mile-end in 1797, and the second time in 1804, at Sir C. Greville's, at Paddington.

It is readily propagated by seeds, and is cultivated in large tubs in the stoves of this country. The following routine of treatment is usually found successful:-Let the seeds be sown about the end of March, and in performing the operation, file or cut off a small portion of the thick end of the shell, so as to allow the escape of the radicle: the shell of the seed being hard, would obstruct and frequently prevent germination, if this were not attended to. In sowing, place the seeds in a feeder of water, and place them on a flue where the water will continually be kept warm; in a short time they will show signs of vegetation, and when the first is begun to be formed, they may each be potted in a small pot of rich soil or slimy mud, and the pots placed in a pan or cistern of water: or they may be planted in somewhat larger pots, having the hole well stopped, so as to contain a portion of water, the plant growing in the soil or mud, placed at the bottom of the pot. In either case they require but little additional treatment during the summer, except the frequent application of river water. In October the tops will die down, in which case the supply of water must be decreased, so as to keep them but just in a moist condition, and thus they should be allowed to remain until the spring. About the end of February or beginning of March, the plants should be re-potted into large pots in the same manner, using rich soil or mud, and placing them again in the tub or cistern of water. If the plants are strong, they may at once be planted in the bottom of a large tub; for this purpose, let about a foot of the soil be put in the bottom of the tub, in which place the plant, give it sufficient water to float the leaves, and let the quantity be increased as the plant advances in growth; by this treatment they will grow rapidly, and flower in the most splendid manner.

As it is necessary that the water should be frequently changed by taking away a portion, and replenishing it with fresh; pond or river water should also be employed, and it must be applied in a tepid state. The temperature of the stove is indispensable in the successful culture of this splendid plant, and, though not frequently seen in a free blooming state, it is of the easiest growth when its wants are supplied. These may briefly be enumerated thus: comparative drought whilst resting, and a strong heat, rich muddy soil, tepid water, and a free uncircumscribed expansion of its foliage, whilst in a growing state.

ON THE TREATMENT, WITH A VIEW TO RENOVATE HARD-WOODED GREENHOUSE PLANTS, WHICH MAY HAVE BECOME SICKLY.

BY S.

In potting delicate and sickly plants, particularly such as Banksias, Chorozemas, Epacris, Boronias, Hoveas, Helichrysums, &c., and indeed most, if not all, Hard-wooded Greenhouse Plants, the greatest care and judgment is necessary. In the first place, let us suppose, that the plants are found in the spring, to be either delicate or sickly. If delicate in growth, the plants should be taken carefully out of their pots, and if it be seen that they are making roots, they may be potted again into the same sized pots, reducing the old ball of earth in a trifling degree, or if the roots are likely to abound, a size larger pot may be used; in either case, its own peculiar soil, made somewhat more sandy than usual, should be used, and the utmost precaution taken that the pot is well drained. The soil in potting should be made quite firm, so as not to leave a vacuity between the roots, and the sides of the pots; after this is performed, the plants may be removed to an airy part of the greenhouse, where they may enjoy plenty of light, and at the same time be shaded partially from the sun.

If the plants are sickly, in consequence of being over-potted, or the soil becoming soured, or soddened with water, through ineffectual drainage, a considerable quantity of soil must be removed from their roots, without injuring any of the fibres which may be alive and healthy; they must then be potted in pots as small as the roots can reasonably be compressed into, rendering the soil quite firm, both amongst, and around the roots. If the old ball is very wet, it will be better to allow it to become somewhat drier before it is re-potted. Plants, when reduced to this state, should be slightly elevated in the pots at each shifting, (if not previously practised,) in the manner recommended by Mr. M'Nab, for Heaths, all New Holland plants being much benefitted by the practice.* Nothing can be more injurious to plants, than keeping them low in their pots; and, as a general rule, which admits of but few exceptions, no plants should, in potting, be placed lower than they were in their previous pots: and for such plants as those now under consideration, they are greatly benefitted by being slightly elevated at each successive shifting. After this operation is performed, the plants should be removed to a

[*These remarks of our correspondent will, we trust, be found highly useful to many of our readers. In a previous part of this work (Vol. 5, p. 243) some attention has been directed to this subject, in some remarks on the injurious effects resulting from deep planting. Those remarks, although made with reference to the planting of trees, and especially of fruit trees, yet apply with equal force in the case of potted plants. In free growing plants, whether ligneous or herbaceous, the effect of burying the collar or vital point, below the soil, is to produce rankness and luxuriance of growth, the sure forerunners of premature debility and decay. In delicate plants, whose functions are not capable of elaborating the superabundant supply of food, which is then taken up by the roots in its most crude state, the effect is generally a more speedy specification of decay in the altered and sallow appearance of the plants, and very frequently in their sudden defunction, without any apparent cause. Among tender soft wooded greenhouse plants, we often hear complaints of their "fogging" during winter, and although dampness of atmosphere may have a share in producing this effect, yet we may confidently assert, that such plants are rendered much more susceptible of injury by the cause we are now speaking of, and that, were this fertile source of disappointment avoided, the complaints of such plants "damping off" and "fogging" would be much less frequent. In all plants, therefore, which do not naturally produce roots from their stems when deeply planted, such as, for instance, the balsam among tender plants, and the willow among ligneous ones, the neck or collar should, on no account, be more than an inch below the surface of the soil, whilst in their infant state, and that by successive elevations this part should afterwards be raised just above the surface of the soil. We need not carry this principle to an extreme point, and recommend plants to be elevated so as to render them unsightly; all that we would require, being so far to plant, or pot them above the general level, as to avoid the risk of burying the vital point by accidental oversight, or any other cause .- ED.]

shelf, or stage, in a propagating, or close pit, where the temperature can be kept rather warmer than that ordinarily afforded them, and where at the same time, they can be kept somewhat close until they evince signs of growth. In such a situation as this, there is little fear but that they will grow, and in due time, become recovered; but, if no such convenience is at hand, a warm close part of the greenhouse must be substituted, where they may enjoy plenty of light, and be shaded regularly from the fierce rays of the sun, until they are so far recovered as to bear exposure with impunity. Considerable care is necessary in the application of water; frequent supplies, in moderate quantities, should in general be the standard rule, rather than more inordinate, though less frequent applications.

In cases where sickliness and debility are observed during the summer, the plant should, without delay, be submitted to the course above recommended; if, in the autumnal months, they should be re-potted, and kept in a warm part of the greenhouse until spring, and then be removed to the propagating-house as already directed. But, if during the depth of winter, they must remain until the latter end of February, giving them as little water during that period as possible; they may then be treated in the manner already recommended.

ON THE MEANS OF PREVENTING THE DEPREDA-TIONS OF SNAILS AND SLUGS ON WALL FRUIT, AND ALSO THE ATTACKS OF MICE ON NEWLY-SOWN PEAS.

BY A CONSTANT READER.

Those gardeners and persons who have had the management of Wall-trees, must be aware of the injury and destruction often caused by snails; I can only say, that no person can have been more pestered than myself with the vermin alluded to. I have tried many remedies, and amongst others, the never-ending one of laying down cabbage leaves in the evening, and examining them early in the morning; a plan which has been of long standing, but, which, I do not consider a good one. I observe, in Mr. Loudon's Magazine, that he recommends greasing the underside of the leaves previously to laying them down; this practice may be well adapted to bring the slugs to the wall, but, I would beg to state, that all the slugs which come to try the cabbage leaves and grease, do not remain on them until the morning, but travel in search of sweeter food, namely, the wall fruit. My patience allowed me to follow this plan for a

considerable time, until at last, finding the results so unsatisfactory, I was determined no longer to feast them on cabbage leaves, but to have recourse to an expedient which I have found successful. The plan which I adopted is as follows :- I procured some furze bushes, and chopped them very small, and laid them along at the bottom of the wall, about two or three inches in thickness, and about six inches in width; on the top of this I laid broken rock salt, made about the size of garden peas. (The salt used must be rock salt, the common salt being soon wasted by a damp atmosphere.) This plan will be found effectually to prevent the depredations of these pests, at least, I have hitherto found it so; and I can only say, that the slugs are as easily caught on the furze, as on cabbage leaves: they are not quite so fond of the former with the salt, as they are of the latter when well greased. I have found the same remedy very successful, in preventing the depredations of mice on newly-sown peas, by strewing some of the furze amongst the peas, at the time of sowing, and laying some directly over the rows, after the soil is filled in; in this case, the use of salt is unnecessary, the furze alone being quite sufficient.

Having employed the above remedy with great success, I would advise every gardener who is pestered with these vermin to adopt it.

Norwood, Nov. 30, 1841.

ON THE CULTURE OF PHLOXES.

BY W. TAYLOR, GARDENER TO J. COSTAR, ESQ., STREATHAM.

Not having seen in your valuable publication any remarks on the beautiful genus Phlox, I have forwarded the accompanying remarks for insertion therein; they will be found valuable, I trust, from the list of species which is appended to them, and which, being classed according to their respective heights, will be an assistance to those amateur cultivators, who may take up the cultivation of a genus of plants which has so much to recommend it to notice. The Phlox is an extensive genus of hardy herbaceous plants, comprised of upwards of fifty species, which are, for the most part, natives of North America; besides these, very many varieties have been originated by the process of hybridization, so that there are few genera of hardy plants which can boast of so rich and varied an assemblage as our present subject. But it is not only in the number of species and varieties of which this genus can boast, that it rests its sole claim to especial cultivation; a combination of other good qualities are sufficiently prominent, as to render a mere enumeration of them quite sufficient to secure the good opinion of those who may heretofore have regarded them at best with indifference. In the first place, they are

almost, without exception, perfectly hardy, and the few kinds which stand in need of protection, will thrive with so small an amount bestowed on them, that the objection almost vanishes; thus, the most humble cultivator, the careful and assiduous amateur, or those who boast of the most exalted rank, may each enjoy, in their own sphere, the fullest amount of satisfaction, as the result of a very small amount of care, compared with that bestowed on more favoured, though less deserving subjects. In the next place, their cultivation is so simple, and so little embarrassed by difficulties, even of an ordinary nature, that a person who has but a remote idea of the nature of vegetable life, if that item of knowledge is brought into exercise, cannot fail in the result. Among Phloxes too, the greatest diversity of altitude and habit prevail, thus rendering them available for any purpose of the culturist; and, as regards the colouring of their blossoms, we find almost every shade, from the purest white to the richest rose-colour, lilac, or celestial blue.

Such being a few of the claims which this genus has upon the notice of the real lover of flowers, I trust they will afford a sufficient excuse for the following remarks on the treatment, which I have found to suit them, in a practice of some years. It is true that they thrive well with the most ordinary treatment, and I have referred to that as one of their recommendations, but their superlative beauty renders them exceedingly deserving of any amount of care in the preparation of soil which the culturist may think fit to bestow.

The soil, then, in which I have found them to succeed perfectly, is a good turfy loam, enriched and lightened by the admixture of leaf mould; they require a depth of soil, not less than from one and half feet to two. The situation which I prefer, is that which, being rather moist, admits, at the same time, of perfect drainage; for though a damp soil is necessary to their perfection, especially during summer, they will not succeed well, if stagnant water is suffered to accumulate It will be evident from this, that during the hot dry months of summer, recourse must be had to the artificial application of water; when this is attempted, it should be done effectually, so as to avoid the necessity of continued applications. The surface soil should likewise be frequently loosened, as the best means of keeping that beneath it in a damp state. The advantage of cultivating them in a well drained situation, consists, in the greater degree of certainty with which they survive the winter; for, though indifferent of cold, they sometimes suffer from the excessive wetness of our winters.

Those kinds, as P, nivalis, and floridanum, which require protection, will succeed, if covered around the stems with dry saw dust, and protected from wet, either by a small hand-glass, or an inverted flower pot, in all cases exposing them at every suitable opportunity.

Wherever collections of these plants are cultivated, they should be planted in beds, en-masse; the taller kinds being planted either in the centre, or at the back of the bed, as the case may be, and those of dwarfer habit, planted in front. It not unfrequently happens, that from inattention to this particular, collections of plants assume a confused and unsightly appearance; whereas, had a due attention been paid in such cases to the individual heights of the plants, an orderly and trim appearance would have resulted. In the annexed list, the heights of the kinds are given; and, though soil and situation may induce a considerable variation in some cases, yet, I trust they will materially assist in producing a better arrangement of the plants in question.

The propagation of Phloxes, is effected either by seeds, by cuttings, or by dividing the roots; the former course is adopted, with a view of attaining desirable variations, and, in this case, artificial fecundation is resorted to. The latter mode is most common with established kinds, at least, such of them as produce annual stems. A few dwarf kinds are propagated by cuttings, planted either under a hand-glass, or in pots of sandy loam. The same course is adopted with desirable new kinds, of which it may be desirable to procure a stock. The cuttings are, of course, taken off, and planted in the usual manner.

When treated with care, Phloxes form beautiful objects, when cultivated in pots; and they have an exceedingly fine appearance, when intermixed with other plants, in large houses. Omnifiora, is the best white, and reflexa, the best purple, which I have tried for this purpose. Some of the splendid new kinds will probably be also suitable for this mode of treatment.

LIST OF FIFTY KINDS OF PHLOX, ARRANGED ACCORDING TO THE HEIGHT THEY USUALLY ATTAIN.

1st.-Plants prostrate, not herbaceous, from four to six inches.

l.—floridanum.

nuttalliana.

2.—setacea.
3.—nivalis.

aristata.

4.—subulata.

5.—reptans.

stolonifera.
6.—reptans crassifolia.

crassifolia.

verna.
7,—procumbens.

2nd .- Plants herbaceous, from nine to twelves inches.

1.—divaricata. 4.—pilosa. 2.—ovata. 5.—pilosa amæna. Listoniana. amæna.

3 .- canadensis. '

1Brownii.		8.—triflora.	
2.—Yeungii.		carnea.	
3.—omniflora.		Hookerii.	
4Atki	nsii.	9.—suaveolens.	
5.—suffr	uticosa.	10.	variegata.
6glaberrima.		11Lorranii.	
7.—Pax	tonii.	12.—Thompsonii.	
4th	-Plants herbace	eous, from tw	o to three feet.
1virginica.		4.—elegans.	
2.—tardiflora		5.—elegantissima.	
longiflora.		6 Alcardii.	
3Brid			
5th	-Plants herbace	ous, from th	ree to four feet.
1.—acuminata.		9.—Pottsii.	
decussata.		10.—penduliflora.	
2.—lœta.		11.—odorata	
3acutifolia.		12.—reflexa:	
1.—corymbosa.		marylandica.	
5.—latifolia		13.—Jenkinsonii.	
6Wheeleriana.		14.—Coldryana	
7.—Ingramiana.		15.—splendens.	
8 Riv	ersii.		
6th.	-Plants herbac	eous, from f	our to five feet.
I paniculata.		6	Cordata grandiflora
2.	alba.	7	.—scabra.
3.	grandis.		Americana.

REFERENCE TO PLATE LXIX.

Sickmanii.

PHLOX BRIDGESIL

4.-Broughtonii.

5.-cordata.

NAT. ORD. POLEMONIACÆA. CLASS PENTANDRIA MONOGYNIA.

Among the many genera which have been rendered more and more interesting, by the addition of new and beautiful members, the genus Phlox holds a conspicuous rank. Of the easiest culture, and perfectly hardy, it has long been a favourite in our collections of herbaceous plants; the great beauty of many even of the older kinds, being sufficient to uphold it in the esteem of every devoted florist. Subsequently, however, the genus has somewhat changed its position, and it may now be regarded as a popular one—one on which the improving hand of man has been employed, and one on which that hand has not been employed in vain, as the many beautiful recent additions made to it will bear ample testimony. We have procured, through the favour of a friend, figures of several of these, which we shall from time to time publish. That now represented is a free-growing kind, attaining two and a half feet in height, and forming a dense pyramid of bloom. The leaves are cordate-lanceolate, and the



Phlox Bridgasii.

flowers produced generally in pairs, of a pale flesh colour. It is one of the best and most distinct varieties in cultivation, and has been named in honour of Mrs. Bridges, a devoted admirer of Flora. It was sent out by Messrs. Young, of Epsom, in 1840. Our figure was taken from a plant in the garden of J. Costar, Esq., of Streatham, through the kindness of the gardener, Mr. Taylor, who has also favoured us with some remarks on the genus, with a list of kinds, which are published in the present number, and to which we beg to refer.

NOTICES OF NEW PLANTS.

ACHIMENES ROSEA, Rose-coloured Achimenes.

Bot. Reg.

NAT. ORD. GESNERACE &. CLASS DIDYNAMIA ANGIOSPERMIA.

Most of our readers will readily call to mind the beautiful Cyrilla pulchella, or, as it has subsequently been named, Trevirana coccinea; but all may not be aware that its name has been again changed to Achimenes coccinea. The name now applied to such plants as these, was originally given by Dr. Patrick Brown, in his History of Jamaica, to two species, one of which has long been common in our gardens. At a later period, L'Heretier called the latter Cyrilla, and under the name of C. pulchella it is familiar to all lovers of beautiful plants; but as it was very different from the Cyrilla of Linnæus, that name has been subsequently cancelled: then it was that Willdenow, proposed the name of Trevirana, in which he has been followed by others, and we think it would have been far better had that name been retained. Now, however, M. de Candolle, following Persoon and Nees, has restored the name of Achimenes; and it would be more inconvenient to resist the innovation than to adopt it, since it has taken place in a work so universally employed by systematists, as the Prodomus of M. de Candolle." The present plant, in habit and cultivation, is the exact counterpart of A coccines, the difference consisting in the former having deep rich rosecoloured flowers, not less beautiful than those of its congener. It was found in Guatemala by Mr. Hartweg, and is of easy cultivation.

CLEOME LUTEA, Golden Cleome.

Bot. Reg.

NAT. ORD. CAPPARIDACEÆ. CLASS HEXANDRIA MONOGYNIA.

A hardy annual from the North-West coast of America, flowering in July and August, and requiring rather a strong soil and dry situation. It bears terminal heads of yellow flowers; not very attractive.

ONCIDIUM ORNITHORHYNCHUM, Bird's-beak Oncidium.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A very pretty species, with small light rose coloured flowers, on a graceful panicle, a foot or more in length; they are moreover fragrant. It is a native of Mexico, growing on mountains of considerable elevation.

FUCHSIA RADICANS, Rooting Fuchsia.

Bot. Reg.

NAT. ORD. ONAGRACE &. CLASS OCTANDRIA MONOGYNIA.

This plant has been previously mentioned in this work; the following is Mr. Miers' account of the species:—"I was greatly struck with this beautiful species when I first met with it in the Organ Mountains, in 1829, clinging in long festoons, from a very tall tree, and exhibiting abundance of its brilliant flowers.

It was also collected by Mr. Gardner, when he first botanised in the same range; and on my last visit to those mountains, I planted a cutting, which I succeeded in bringing home, and which, although near four years old, has only now shewn its first blossom. The main stem has attained a length of eighteen feet, and it has many accessory branches of nearly equal length; the older stems throughout their entire length exhibit, at each axle, the peculiar stoloniform shoots, and these are sometimes observed also in the internodes bursting through the bark. It appears to me quite a novel species, approaching F. affinis, of St. Hiliare, but differing in the proportions of its calyx, and in its general habit, in which last respect it bears a great approximation to F. apetala, and F. simplicicaulis, whose branches are represented as having similar radicant shoots. From its bandsome flowers, and trailing habit, this species is likely to become a favourite crnament in greenhouses, where it will flourish well; for though its native place is just within the tropics, it grows at an elevation of 3000 feet, where it experiences during the nights of the Brazilian winter, in those regions, a temperature frequently as low as thirty-five to forty degrees Fahrenheit."

RIGIDELLA IMMACULATA, Spotless Stiffstalk.

Bot. Reg.

NAT. ORD. IRIDACEM. CLASS MONADELPHIA TRIANDRIA.

A half hardy bulb, related to Tigridia, with stiff erect narrow foliage, and ephemeral deep scarlet flowers, without any spotting. It was sent to the Horticultural Society from Guatemala, by Mr. Hartweg.

HOULLETIA VITTATA, Striped Houlletia.

LBot. Reg.

NAT. ORD. ORCHIDACEE. CLASS GYNANDRIA MONANDRIA.

A very curious and ornamental species, with erect pyramidal spikes of yellow flowers, so much streaked with deep chocolate-colour, that the former is hardly seen, except on the lip. It was received by Messrs. Loddiges from Mr. Schomburgk.

CATTLEYA CRISPA, Crisp-flowered Cattleya.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This is one the most beautiful species of a beautiful genus. It was first introduced to our gardens in 1826, by Sir Henry Chamberlayne, Bart., and subsequently by numerous collectors. The sepals and petals are white or cream-coloured, faintly tinged with purple; the edges of the latter much waved and crisped, the lip is yellow at the base, the prominent part rich deep red. It is a native of Brazil.

FUCHSIA CORDIFOLIA, Heart-leaved Fuchsia.

[Bot. Reg.

NAT. ORD. ONAGRACEÆ. CLASS OCTANDRIA MONOGYNIA.

This species, although less beautiful in its blossoms than either F. fulgens or corymbiflora, yet is still a very desirable kind, its habit being superior to that of most other kinds, and its long light scarlet flowers, tipped with green, far from being devoid of beauty; it, moreover, promises to be valuable for the purposes of hybridization. "The species of Fuchsia, numerous as they are in gardens, have still to be increased by some of the most interesting and handsome. If the woods of Mexico and Chili, now almost exhausted, have yielded us the species called thymifolia, microphylla, cylindrica, lycioides, fulgens, macrostemma gracilis, and all their train of beautiful hybrids, we have still the rich storehouse of the Cordilleras of Peru to investigate, from whence F. corymbiflora only, itself a treasure, has as yet appeared; for these we may confidently look to Mr. Hart-

weg, who is now on his route from the Cinchona forests of Guayaquil, to the untrodden mountains of Popayan, and along all that rich wooded district Funchsias may be expected to abound." The berry of F. cordifolia, in its wild state, is from one to one and a half inch long, and pleasant to the taste; the Guatemaless call it Melocotoncito, and apparently eat it.

OPUNTIA MONACANTHA, One-spined Prickly-Fig.

Bot. Mag.

NAT. ORD. CACTACEE. CLASS ICOSANDRIA MONOGYNIA.

"Rich as onr gardens are in Cactere, and much as they are prized by cultivators, on account of the singularity of the forms of some, and the exquisite beauty of the blossoms in others, it is greatly to be lamented that the synonyme of those which are described, is so faulty, and that so many are ill characterised; every collection containing many similar species under different names. The present individual, which flowers readily during the summer months, has borne the name of Opuntia Tuna; it being nnquestionably the Cactus opuntia of De Candolle; this differs from the real Tnna of Dillenius, among other characters in its general solitary spines. On this account, Willdenow distinguished it by the name of monacantha, which De Candolle adopts in his "Prodomus," but he has inadvertently referred to a figure in his "Plantes Grasses," 137, tab. 2, which is his Cactus coccinellifer, (the O. tuna of Miller, and Pleiffer.) Pfeiffer on the other hand, quotes rightly the C. opuntia tuna, of "Plantes Grasses," with the glaucous articulations, and nearly solitary spines; but he unfortunately adds the O. monacantha of Ker, in Bot. Reg. tab 1726, which, is a perfectly distinct plant from the original one of De Candolle, The species is supposed to be a native of Brazil. The flowers are deep orange brown.

OPUNTIA DECUMBENS, Decumbent Prickly-Fig.

Bot. Mag.

(Synonymes o. BEPENS, Karwinski, o. IRBORATA Martius.)

This species, as well as the last, has flowered at Kew during the last summer. The flowers of the present subject are yellow, with obovate waved spreading petals, and produced three or four together. The plant is of a lively green, the articulations obovate, thick, much compressed at and below the arcoeæ, which are composed of small pulvinate tufts, with one or two small spines, often recurved; at the base of the articulation is generally a solitary acciduar spine about three-fourths of an inch long.

STYLIDIUM RECURVUM, Recurved Stylidium.

[Bot. Mag.

HAT. ORD. STYLIDIACE ... CLASS GYNANDRIA DIANDRIA.

A dwarf slender plant, indigenous to Australia, and recently added to our collections. Its stems are suffruticose, much branched in tufts, from whence long wiry roots are sent down. The leaves are crowded on the stems, subulate of a deep green. The flowers are of a reddish colour, yellow in the throat, and produced in cymose peduncles from the apex of the branches. It is an interesting little plant.

GESNERA MOLLES, Downy Gesnera.

Paxton's Mag.

NAT. ORD. GESNERACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

A native of Caraccas, introduced to this country in 1839. In this genus there are several groups, the individuals composing which have a great resemblance to each other in some of their features. Thus the members of the section with irregular flowers, as G. bulbosa, Cooperi, faucialis, Sellowi, &c., can hardly be distinguished either by their flowers, foliage, or tubers, when viewed apart from Vol. VI. 2 A

their connection with the other organs. The present species is furnished with soft down on its broad ample leaves and stems; it also attains a considerable height without conspicuously branching, or producing prominent lateral shoots. In the flowers it approaches near to G. elongata; but, though similar in form colour, and spotting, they are more inflated in comparison with their length, and are produced in threes from the axles of the leaves, on long peduncles; whilst those of G. elongata are borne in clusters of four. It demands no unusual cultivation; a rich soil, in comparatively a large [pot, with comparative dryness in winter, and an abundant supply of water whilst growing, are its chief requisites. Perhaps too, it will be benefitted by a little stove-heat in spring, and a gradual removal to the greenhouse towards the end of May, or the commencement of June. It is increased by cuttings or suckers.

ÆRIDES QUINQUEVULNERUM, Five-spotted flowered Air-plant. [Pax. Mag. NAT. ORD. ORCHIDACE. CLASS GYNANDRIA MONANDRIA.

This rare species is also one of the most showy of its beautiful race. In its mode of growth it resembles A. odorata. The colour of the flowers, however, have a superior richness. The sepals and petals are whitish, slightly speckled with purple, and having a rich purplish-lilae stain at their apex. The spur of the lip is green; the two side lobes pale pink, spotted with purple, and the middle one deep crimson. It is cultivated as the other species of the genus.

BIGNONIA CAPREOLATA, Tendrilled Trumpet-flower. [Paxton's Mag.

NAT. ORD. BIGNONIACE.E. CLASS DIDYNAMIA ANGIOSPERMIA.

This truly valuable climber, though commonly grown, is rarely seen to flower in perfection. Being regarded as a hardy species, it is usually treated in the same manner as plants of that description, and hence seldom brought to a free flowering state. In the collection of W. Leaf, Esq., of Streatham, where it is grown as a conservatory climber, Mr. Dodemeade, the gardener, succeeds in blooming it to perfection in the summer months, by refraining from the use of the pruning knife, and permitting the long, flexible, and graceful branches to hang downwards from the roof and sides of the house. The too general error in cultivating this plant, consists in shortening the shoots after the plant has attained a mature age. Under this treatment, numerous lateral, but barren shoots are annually produced; whereas, by leaving these to depend from the main branches, the production of blossoms is ensured, by the prevention of superabundant and useless developement.

MARIANTHUS CÆRULEO-PUNCTATUS, Blue-spotted Flowered Marianthus.

[Paxton's Mag.

NAT. ORD. PITTOSPORACEÆ. CLASS PENTANDRIA MONOGYNIA.

We have already noticed this plant at page 113 of the present volume, and we refer to it again to give the following particulars respecting it:—"At Messra. Henderson's, of Pineapple-place, we met with it in very profuse bloom, in the summer of 1840. It was treated as an ordinary greenhouse climber, except that it was kept in a pot, and trained to a balloon-shaped wire trellis. The seeds were procured from the Swan River." It is unfit for training on the rafters of a house, on account of the tenuity of its stems, and its paucity of leaves. It seems best adapted for pot culture, and to be thickly trained around a circular trellis. It blooms throughout the summer months. It is not known whence the name Marianthus is derived. Dr. Graham suggests that it may have been dedicated to the Virgin Mary, "on account of the pure whiteness of the first-discovered species."

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

CIRRHOPETALUM MACULOSUM.

An Indian species of little beauty, sent by Dr. Wallich, to Messrs. Loddiges.

ONCIDIUM BARKERI.

A fine species imported from Mexico, by Mr. Barker. It has very large flowers of a clear but pale yellow on the lip, and rich brown spotted sepals and petals; the lip is of unusual size, being more than one inch and a half across.

ONCIDIUM NEBULOSUM.

A fine species, with something like the appearance of O. reflexum, but readily known by its pseudo-bulbs. The flowers are large, rather pale yellow, with faint spots of brown on the base of the lip, and on the sepals and petals. It is a native of Guatemala, whence it has been sent to the Horticultural Society by Mr. Hartweg.

BROMHEADIA PALUSTRIS.

"When Mr. Finlayson was in the Malay Archipelago, he found a curious orchidaceous plant at Sincapore, with the habit of Epidendrum elongatum; and from specimens of it, almost destroyed by insects, which I examined some years since in Dr. Wallich's Herbarium, I referred it with great doubt to Grammatophyllum, under the name of Finlaysonianum. This plant has lately flowered, at Penllergan, in South Wales, with J. D. Llewelyn, Esq., who received it from Cuming, with the memorandum that it had been 'dug out of a bug in Sumatra.' Having now the advantage of examining a perfect specimen in flower, I find that although nearly allied to Grammatophyllum, it is in fact very distinct. 1, therefore, avail myself of the opportunity of adding to the list of genera, the name of Sir E. F. Bromhead, Bart., F.R.S., whose investigations of the natural affinities of plants are well known to systematic botanists."

SALVIA EXCELSA.

A new species, introduced to the Horticultural Society's Garden from Guatetemala, by Mr. Hartweg. It grows ten or twelve feet high, with broad deep green leaves, and angular stems. The flowers are in naked racemes, of from four to six inches in length, and are of a rich crimson colour, but they drop soon after opening.

GESNERA LONGIFOLIA.

A fine plant from Guatemala, sent by Mr. Hartweg. It has a stout stem, about two feet high, thick drooping leaves, from five to eight inches long, and rich crimson flowers, an inch in length, and unusually thick. In the way of G. allagophylla, but much handsomer.

CENTROPOGON CORDIFOLIUS.

A greenhouse plant, from Guatemala, where it was found by Mr. Hartweg It has fine broad heart-shaped light green shining leaves, and deep rose coloured flowers, resembling those of C. (Lobelia) surinamensis.

PLEUROTHALLIS GELIDA.

Obtained from Jamaica, by Messrs. Loddiges. It has the habit of P. racemiflora, and grows a foot high.

MORMODES BUCCINATOR.

Of this singular plant Messrs. Loddiges have obtained a variety rom La Guayra, which, with all the form of the original, has the flowers dull orange, spotted with brown. It is handsomer than the first sort, and looks at first sight like M. aromaticum.

EPIDENDRUM VIRGATUM.

A free growing epiphyte, with small dirty-green flowers, stained with brown and arranged in very long lax graceful panicles, the branches of which are simple, and often nearly a foot long, with near twenty flowers on each; the lip is whitish-yellow. It was first found near Teoxomulco, in the province of Oaxaca, by Karwinski, and has been sent from Mexico, by Mr. Hartweg.

PLEUROTHALLIS SICARIA.

A native of Trinidad. In habit it is most remarkable, its stem being exactly like a bayonet blade, with the point downwards. The flowers are greenishyllow, with pale purple stripes on the sepals, much deeper stripes on the petals, and none on the labellum.

PLEUROTHALLIS FRAGILIS.

This little plant has the habit of P. prolifera; but the leaves are flat, not folded together, and it is not proliferous. The flowers are bright orange yellow, and very brittle, like wax, with a double row of minute purple dots along the midde of the labellum. Messrs, Loddiges have obtained it from Rio.

POLYGONUM MOLLE.

A half-shrubby herbaceous plant, from the North of India, with small white flowers, profusely produced in close panicles at the ends of the branches.

TRITELEIA AUREA.

A small bulbous plant, with deep yellow flowers, from Moute Video.

MORMODES AROMATICUM.

A Mexican plant, with pale pinkish flowers, studded with wine-red spots. It is uncertain whether it is distinct from M. pardina or not.

EPIDENDRUM LATILABIUM.

A Brazilian plant, with the habit of E: umbellatum, to which it is allied.

EULOPHIA SQUALIDA.

A terrestrial orchidaceous plant, of no beauty, with leaves like those of a Bletis, and a scape of dingy pallid flowers.

DENDROBIUM EXCISUM.

A small species, a native of Sincapore, with small inconspicuous white flowers.

DENDROBIUM SECUNDUM.

A pretty plant, lately flowered by Mr. Knight.

LOBELIA PYRAMIDALIS.

An herbaceous plant, from the Himalayas, of no beauty; it has narrow, finely serrated leaves, and greenish violet flowers, so embosomed among long green leafy bracts, as to be hardly distinguishable to a mere casual observer.

BOLBOPHYLLUM CLANDESTINUM.

A curious, but inconspicuous plant, from Sincapore; the minute flowers are straw coloured, and the whole habit of the plant like that of some creeping Fern.

CATESETUM FULIGINOSUM.

A singular plant, lately flowered at Sion, with the habit of C. tridentatum. In this masquing genus, it is impossible to say what is a species, and what is not; judging from rules, which hold good in other genera, this is quite a distinct species; judging from the evidence we possess of C. tridentatum, cristatum, and wirde, we should suspect it to be a male form of C. atratum, or some such species."

NIPHÆA OBLONGA.

An extremely fine herbaceous stove plant, with a dwarf stem, hairy, fleshy, oblong serrated leaves, like those of Gloxinia, and bearing a cluster of large snow white flowers at the summit of the stem. It was sent from Guatemala to the Horticultural Society, by Mr. Hartweg, "and proves to be a new Gesneraceous genus, differing from all those in Gesneraceous proper, in having the rotate corolla of a Ramonda, and from Gloxinia, to which it most nearly approaches, in the want of perigynous glands, and of a gibbosity at the base of the corolla."

DENDROBIUM CAMBRIDGEANUM.

A native of the Khoseea Hills of India, found at an elevation of 4000 feet attaching itself to rocks and trees; it has large rich yellow flowers, with a deep purple stain in the middle of the lip.

MISCELLANIES.

DESTRUCTION OF THE WHITE SCALE, OR PINE-BUG, (COCCUS ADONIDUM) .--The plan we have usually followed for the destruction of this insect, is simple and easy of application; and when properly applied, we have never seen it fail, It is as follows:-First, take one peck of clean soot, one peck of quick lime, put them in a tub, and add twenty gallons of water; stir up the mixture well every day, and take off the scum as it rises, until the liquid is perfectly clear. The above being ready, next get a quantity of strong soap suds from the washhouse, and on the first hot day, water the infested plants overhead with them in a warm state; this may be done either with a syringe, garden engine, or rose wateringpot; the day following use the clear lime and soot water in the same manner, adding to each two gallons of the clear liquor, one quart of strong tobaccowater, (such as is obtained at the tobacco-manufactories is the best.) Repeat these two liquids as before, viz, the suds one day, and the lime solution the next, and in a short time the insects will disappear. It is indispensible that the house, or pit, in which the plants are, should be kept close shut up, and the heat allowed to become very strong; to prevent injury from the sun, shade with woollen nets, or other conveniency. It is necessary that the suds and the lime solution be applied separately, as they will not mix, and if not used alternately, the effects on the insects are only partial. The first dressing generally changes the colour of theinsect to a dull brown, and the process seldom requires repeating more than three times; if, however, any appear to have escaped, continue to repeat it until they are effectually destroyed .- Blight on Flowers, Gardener's Library, Vol. 2,

THE GRUB.—We have often heard a great deal of talk about the grub, and like the most of folks, were contented just to talk about these pests of the farmer, as if they had been meant merely to destroy, and be talked about; but now we

have formed a resolution to talk very little about the matter, but just get clear of them as speedily as possible, and by very simple means too. Mr. Campbell, of Dale, Ardiangia, sowed about 15 acres of corn this spring, which came off beauti fully, and promised an abundant harvest. On a sudden, however, it became sickly, and ultimately presented to the eye, only a wide sheet of red soil, with hardly a green blade to mark where vegetation was, but a few days before, so luxuriant. This chilling reversion was caused by the grub. Mr. Ferrier, ground officer, Killen, had witnessed the change, and advised Mr. Campbell to dibble holes over the whole fields, at the distance of from two to two-and-a-half fert. Like a true Highlander, Mr. Campbell took the advice cautiously, and began by trying what a few holes here and there would effect; the morning after these were made, he had, on an average, four grubs in each. He then employed 14 or 16 individuals for two days in making holes, so that the fifteen acres were at last holed like a riddle. The effect of the scheme was that, in three days, each hole on an average contained a dozen grubs. In a week or so, the whole field was again robed in the cheering vesture of spring, and now when the yellow vestments of autumn wave on every brae, a better and heavier covering is not to be seen in our Highland regions. On light land, Mr. Campbell estimates the cost of destroying the grub at 2s., and on clay soils, at 3s. per acre-surely a cheap plan of removing a great evil .- Perth Courier.

We are informed by a correspondent, that "Rosa Devoniensis," of which Messrs: Lucomb, Pince, and Co. of Exeter, possess the stock, was purchased by them from the raiser, G. Foster, Esq., Oatlands, near Devonport.

HORTICULTURAL SOCIETY'S ROOMS, REGENT-STREET, LONDON .- At the Meeting of the Society, on Tuesday, December 7th, some very beautiful orchidaceous plants were exhibited. One of the most lovely was Barkeria Lindleyana a new species, with beautifully brilliant rosy flowers, in colour resembling those of Epidendrum Skinnerii, which was also exhibited, these, together with a fine spotless variety of Stanhopea Wardii, and some others, were from Mr. Bateman-Mrs. Lawrence sent a magnificent specimen of Zygopetalum intermedium, in fine bloom, another of Z. crinitum, and Vanda Roxburghii unicolor, a variety with olive-brown coloured flowers: cut flowers of Stanhopea graveolens, in general appearance, resembling the variety of S. Wardii, but with a strong and not very agreeable scent, were sent from the garden of Sir C. Lemon, Bart. It was mentioned that the Barkeria, above noted, with all other Orchidacem from Mexico and Guatemala, are found to succeed better when grown in a temperature intermediate between that of a stove and greenhouse, than when submitted to the high temperature in which this tribe of plants is usually grown. A plant of Lœlia albida, with a fine spike of its beautifully scented pure white flowers, having the lip slightly tinged with crimson; and Gesnera longifolia, a handsome species of upright habit, with large foliage, and bearing short thick tubular deep scarlet flowers, on graceful peduncles, from the axils of the leaves, on the upper part of the stem, were from the Society's Garden. Among the fruit exhibited, were some purple Guavas from Lord Sondes, an assortment of apples from Viscount Maynard, and some respectable Pine apples, including a very handsome "Queen," from Penrhyn Castle, weighing three pounds nine ounces; and a remarkably fine " Enville," from T. Williams, Esq., Cobham, weighing seven pounds and a half. The fruit from the Society's Gardens consisted of Glout morceau, Beurre Diel, Bezi vaet, Passe colmar, and Winter Crassane Pears.

A correspondent has obligingly sent us the following notices :-

Erica Lambertiani rosea, appears to be an hybrid between E. Lambertia and E. Ardens, its bushy habit, dark green leaves, and the profuseness of its wax-like rose-coloured flowers, render it a very desirable variety.

Gesnera zebrina—A new and curious plant, with broadly cordate leaves, of a light green colour, veined with dark purple, the stem is about four inches in height, headed by several flower stalks, the flowers are drooping, of an orange-red colour above, and yellow beneath; inside, yellow, spotted with red.

Gesnera molle—The stem of this plant is four or five feet in height, and, together with the leaves and flowers, is covered with rather long pubescence, the leaves are ovate, coarsely serrated, of a reddish colour, and set in threes; flowers numerous from the axles of the leaves, bright red, inside yellow, blotched with dark red; interesting on account of its curious scaly roots.

Gesnera rupestris—A most singular species, with very large peltate, ovate leaves; stem, in young plants scarcely any, progressing very slowly, and in old plants scarcely exceeding one inch; scapes, from the upper surface of the tuberous roots, numerous, erect, slender, about four inches high, with four, twelve, or more flowers on each, slightly pendent, tubular, of a blood red colour, an inch and a half long; a scarce plant.

Portulaca Mallisonii—A beautiful stove succulent, with large rich carmine flowers, having a yellow centre, and produced at the ends of the branches.

QUERY.—Being an old Subscriber to your Work, I have taken the liberty of asking you, if one of Dr. Arnott's Stoves would answer as well as the common flue, for heating a greenhouse. I am about erecting one, 16 feet long, 10 feet wide, and 12 feet high at the back, with a proportionate fall. If one of those Stoves would do, I shall be much obliged, if you would, in your next Number, (January.) answer me this question; also, mention the size of the Stove as near as you well can.

W. D.

Rotherhithe, 2nd December, 1841.

[In answer to the above Query, we consider that an Arnott's Stove would be quite equal to supply the heat required; but, we should very much prefer a well constructed flue, or, what would still be better than either, a Hot-water Apparatus, with one of Rogers's small Conical Boilers, which may be obtained of Mr. Shewen, of Sevenoaks, Kent.—Ed.]

MONTHLY CALENDAR.

FLOWER GARDEN.—The operations which can be effected at this time of the year are but few, and these depend much on circumstances. It may be assumed that all kinds of protection which it may be desirable to afford to tender and valuable plants, has already been provided for; it should, however, be recollected, that whatever kind of covering may be adopted, the plants will, for the most part, require exposure, at all intervals of fine, and mild weather. In frosty weather advantage should be taken of the opportunity afforded for wheeling, renewing or adding soil to flower beds, or borders. But little else can be done, except the ordinary routine of removing leaves, litter, &c., from the walks and lawns.

PLANT STOVE, AND GREENHOUSE.—In these departments, the plants will still be in a dormant condition, and every means should be used to keep them so, until the increased power of the sun, and consequently of light, becomes more favourable to the process of vegetable developement. Orchidaceous plants require the same attention, it being desirable to induce them to make their growth, during the most favourable season, in our latitude. For these reasons, too much fire heat should be avoided, and as much air admitted as can be done with safety; water being at the same time withheld in due proportion. In the greenhouse no more fire heat should be used, than is sufficient to repel frost, and damps, and air should be freely admitted at all times when not frosty, or the wind very keen.

In the flower forcing department the various plants must be introduced in succession, and a regular heat supplied to them; light must be afforded as much as possible, by uncovering the pits, frames, &c. early in the morning. (See page 160.)

KITCHEN AND FRUIT GARDEN.—Various manual operations should receive attention here; the renewal of expended quarters of the kitchen garden, by the application of maiden soil, manure, &c. must be effected; trenching, digging, and where necessary, draining, should be performed; composts should be collected, prepared, and turned; the renewal or formation of fruit tree borders, may be advantageously attended to; and all operations in which carting or wheeling is necessary, are better performed now, as far as possible, in order that they may not interfere too much with the necessary operations of a more advanced period.

The root cellar and storehouses must not be forgotten, but effectual means taken to secure the various roots from frost; for the same reason the fruit room must be kept as close as possible, and all decayed fruit should be picked out carefully, and removed.

If the weather is favourable, a few beans and peas may be sown towards the end of the month, and lettuces and radishes on a mild dungbed. Prune hardy fruit trees when not frosty.

FORCING GARDEN.-In the pine stove, a regular moderate temperature, and the sparing application of air and water are to be attended to. Those plants intended to fruit during summer, will probably require a renewal of the tan bed before long; if possible, however, it had better be deferred till next month, Vineries, to which heat has been applied, require caution, both as to the amount of heat and moisture applied; these should not be given in excess, especially at this season. Now, is a good time to commence forcing, for a moderate early crop: the same remarks will apply to Peach-houses; it is not to be inferred, however, that a dry atmosphere is recommended, but merely that moisture, as well as heat, should not be too freely supplied, at a season when natural light, and the power of the sun are but feeble. Cucumbers, in pits, must have a uniform heat, maintained by dung easings, or, what is preferable, by means of hot water pipes; for this purpose, the small conical boilers, of Mr. Rogers, seem peculiarly adapted, and, their adoption for this, and other purposes, cannot be too strongly urged, when the precarious position of a tender crop, and the liabilities to which they are exposed, when dependent on fermenting matter for a supply of heat, at this season of the year, are taken into view. Great care is also necessary, in duly supplying covering at night, and in admitting fresh air, whenever an opportunity offers.

PLEASURE GROUNDS, PARK, PLANTATIONS, &c.—(See Calendar for last month.) We cannot too strongly impress on our readers, the importance of attending to the effectual draining of land, whether it be pleasure ground, pasture or arable land, or plantations; nothing can be expected to thrive in a soil which is soured and saturated by excessive moisture; and, if this remark be applicable in agricultural, it is so in a greater and more refined degree in an horticultural sense.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXIX.—FEBRUARY, 1842.

ON THE GERMINATION OF SEEDS.

BY T. MOORE.

One of the most interesting operations to which the attention of the amateur cultivator of flowers becomes directed, is that of raising young plants from seed; whether these may be the more common annual flowering plants with which he designs to decorate his parterre, or the more rare, and, therefore, more valuable inhabitants of his greenhouse or stove. It may be that some circumstance or other may have placed a quantity of foreign seeds at his disposal, and in this case, the interest is rendered doubly intense by the hope and desire of becoming possessed of some novelty, in the shape of a beautiful flowering plant, which, perhaps, no other cultivator, or perchance, but few may happen to possess.

It may, perhaps, not be at all irrelevant to devote a brief space of the present number to the consideration of a subject, which we trust, while it peculiarly recommends itself to the class of readers we have named, will not be found uninteresting by others; and we do this more especially at the present time, because the operation is one which now demands the immediate attention of those who may have From this time and forward, the rearing of annuals will be a constantly recurring duty; whilst for all foreign seeds. which have reached this country, as well as those the produce of our greenhouses and hothouses, no more fitting season can be found in which to submit then to the stimulus of germination. preface we will proceed at once to a more minute consideration of Seeds, then, are vital bodies, containing within them all the elements of a future plant; when in a perfectly ripe state they hold a large portion of carbon, and the process of germination is brought about by circumstances and conditions which tend to rid the seed of this principle, by converting it into carbonic acid. These conditions are exposure to moisture and heat in certain quantities,

2 B

and some communication with the atmosphere. In order to convert the carbon of the seed into carbonic acid, the presence of oxygen becomes necessary; this then, the seed procures by the absorption of water, and at the same time, the other constituent of water, namely, hydrogen, becomes fixed in its tissue. Carbonic acid being thus formed by the supply of oxygen derived from the water attracted from the soil, and being given off by respiration, the proportion of fixed carbon, is lowered to an amount suited to the growth of the infant plant. The formation and respiration of carbonic acid, however, takes place most freely in darkness; when exposed to light, a portion of oxygen is given off by the seed, which again fixes its carbon by decomposing carbonic acid; this, though essential in after-growth, is injurious as far as germination is concerned. The absorption of water also causes the parts of the seed to soften and expand, and many of the soluble parts to become fluid, and a sort of circulation becomes established, by which means a communication is maintained between the remote parts of the embryo.

The agency of heat appears to be that of setting the vital principle in action, of expanding the air contained in the microscopic cavities of the seed, and of producing a distension of the organic parts, which have thus their irritability excited, never again to be destroyed, except by death.

The growth or germination of the seeds being thus established by the agency of heat and moisture, the vital action gradually becomes more powerful; the parts enlarge, and new ones are formed by means of a secretion of mucilage, which the plant has the power of It is by this means that the root, (radicle) at first a mere point, extends itself and penetrates the soil in search of food, hitherto supplied by the original substance of the seed. The stem rises in due course and unfolds its cowledons, which, exposed to light, decompose the carbonic acid, and by natural processes, prepare the matter by which all the pre-existing parts are to be solidified. The tendency of the radicle to penetrate the soil, and of the stem to elevate itself, both springing from one centre or base, is one which no power can counteract, "it is an inherent property with which nature has endowed seeds, in order to ensure the young parts, when first called into life, finding each for itself, the situation most suitable to its existence."

We have seen that the germination of seeds is brought about by means of the application of heat and water, under certain conditions, and in limited proportions, assisted by the absence of light, by which latter means the seed is enabled to throw off its superabundant carbon. In applying and carrying this into practice, the seeds are buried in soil, by which means light is kept from them, and from

which they abstract the moisture necessary to their development; heat being furnished by placing them in situations where the temperature is elevated to the necessary degree. Both this and the amount of moisture required, vary greatly, according to the different habits of the plants producing the seeds: and to vary the proportions of these, so as to suit the wants of each, forms the important consideration, without which, seed-sowing would be a mere mechanical operation, instead of affording as it does, a most extended scope for the exercise of judgment and discretion.

Germination, it is true indeed, may be effected by the application of excess of moisture, assisted by heat; but unless in the case of aquatics, or plants naturally thriving in very damp situations, the young plant will speedily perish, in consequence of its respiratory organs becoming impaired, by which means it will be unable to decompose the water it has absorbed, and with which its cavities are filled: this excess of stagnant and putrid moisture becomes the speedy source of infection and death. It will thus be evident, that whilst a certain proportion of moisture is necessary to cause germination, it becomes a matter of importance that that proportion is not exceeded; the conditions which have hitherto been found most suitable, are, to sow the seeds in soil comparatively dry, and to delay the application of water until vegetation is commenced, the force of attraction contained in the seeds will retain around them a sufficient quantity, provided they are placed in an atmosphere, which, whilst it avoids the extreme of aridity, does not fall into the opposite one of excessive dampness. It may be thought, that by recommending dry soil, and delaying the application of water, we are falling into an extreme; but it must be recollected, that the comparatively driest earth is full of water, which can only be driven off by applying intense heat, and, therefore, earth, which to the eye and even the touch may appear dry, will be found to hold a considerable portion of moisture. It must also be borne in mind, that at the first period of germination, the vital powers of the infant plant are necessarily weak; the effect, therefore, of supplying too abundant a share of food would be, to occasion a surfeiting, which would end in its destruction. An atmosphere should, however, be provided, which would prevent the evaporation of the moisture from the soil: and this is fully supplied in that of a hot bed, which, whilst it produces this effect, provides also the necessary elevation of temperature.

The degree of heat necessary to produce germination in seeds varies greatly. Chickweed and Groundsel will vegetate at a slight elevation above the freezing point; hardy plants generally vegetate in a temperature of from forty-five to fifty-five degrees; for those denominated greenhouse plants, from sixty to seventy degrees is

requisite: and for those of the torrid zonc, from seventy to eighty degrees is desirable: an uniform heat of about seventy degrees is generally found convenient for all those kinds which are deemed worthy of the application of heat at all, the more hardy portion of which are removed to a somewat lower temperature, as soon as they vegetate.

The covering of seeds with soil, has been mentioned as necessary, not only for preserving an equable degree of moisture, but also to prevent the action of light on the seeds; it is, however, one of the considerations which requires most care in its performance, especially in the case of small seeds. With large seeds, indeed, but little injury can result if they are covered about their own depth, but with small seeds the least possible covering must be employed, or their feeble powers will not be able to elevate them above it; indeed, very minute seeds, as the spores of Ferns, &c., do not admit of covering at all, but must be scattered lightly over the rough surface of the soil, and the necessary darkness, and confined state of the air, supplied by covering the pots with a pane of glass, and shading them with any thin opaque material.

It is, moreover, highly important that the seeds, especially minute ones, should not be sown too thickly; with larger and more vigorous kinds, indeed, if sown moderately thick, they can be readily separated, as soon as they have vegetated, but with small seedlings, this is not practicable: it becomes a point of necessity, to allow them to remain until they have attained a size which will admit of their being transplanted, and the necessary time which must elapse before this can be the case, would be sufficient to impair, if not to destroy, very many, if they were in a crowded state.

When submitted to this course of treatment, the seeds should be placed in a very calm, close atmosphere, just so damp as to prevent the abstraction of moisture from the soil in which the seeds are deposited, and yet sufficiently dry to avoid too great a deposition of moisture. Both heat, light, and moisture should be supplied in a very regular manner, in order that the changes which the seeds have to undergo, may take place without interruption; for if these are irregularly supplied, so that the process of germination is at one time accelerated, and at another time retarded, the very delicate, and fragile machinery upon which their vitality depends, may become so much deranged and confused, as to be no longer able to perform its proper office, and in that case, death is the inevitable consequence; less speedily, indeed, ensuing perhaps in the case of robust and hardy kinds, but not the less sure.

The course of treatment which we have endeavoured to detail, is that which is necessary to be followed with the seeds of delicate

plants; with others whose vital energies have been impaired, such are those which have been submitted to the vicissitudes of a long voyage, this line of treatment ought also to be rigorously and exactly pursued; whilst with others, such as greenhouse plants, and the race of half-hardy annuals, which are generally reared on hotbeds, and which are for the most part full of life and vigour, the treatment may be very much relaxed; it is, however, important that the great principles necessary to promote germination, and to maintain, in a healthful condition, the current of vegetable life, should be constantly kept in view.

Hitherto, a confined atmosphere has been recommended; as soon, however, as a seed has vegetated, it should be gradually furnished with a supply of that vital air, which is no less necessary to vegetable, than to animal life. Transplantation is the next important object, and this should be performed, as soon as practicable, in a careful manner, using the kind of soil best adapted to the kind of plants, but rendered somewhat lighter, and more porous, than is necessary for the more mature stages of growth. Heat, moisture, and air, must now be supplied with a judicious care, neither supplying them too liberally, nor omitting their application whenever necessary: gradually increased supplies of the latter will become desirable, and this treatment must be pursued until the plants become thoroughly established.

NOTES ON PUBLIC GARDENS, NURSERIES, &c.

BY T. Z.

Horticultural Society's Garden, December 14 .- At this season the large conservatory presents the greatest source of attraction; in it the plants grow with amazing rapidity during the autumn and spring months. Whilst some of the plants do not appear to acquire their natural habits, numberless others are growing into splendid objects; among these I may mention the greater part of the Acacias, the Araucarias, Sollyas, Clianthus, Bossiæa, Luculia, Camellias, and many others. The Luculia gratissima has grown into a splendid plant, and its numerous cymes of delicate pink delightfully scented flowers were peculiarly attractive. It is planted on the north side of the house, where it is partially shaded by the other plants, and to this, perhaps, may be attributed its luxuriance; it is a most delightful conservatory plant. Bossiæa linophylla, also a beautiful shrub even when cultivated in a pot, is growing with such vigour as to have assumed quite a new habit; and if it be, as it is, a graceful plant, when cultivated as before noticed, it is here graceful in a manifold degree. Among the interesting plants in flower, is a new Salvia, named excelsa, from Mr. Hartweg. It is a rapid growing plant, attaining from eight to ten feet in height, and is now covered with spikes of its purplish crimson flowers, which have a very gay appearance; at present its habit is rather coarse, but this may be occasioned by its luxuriance, and would probably be different if grown in a pot: doubtless it will always be a large growing plant, but from its flowering freely at this season in a low temperature, it will on that account be desirable.

In the orchidaceous stove I noticed a plant of the Cephalotus follicularis, a curious little plant of difficult management; it has an appendage to its leaves resembling those of the pitcher plant. To cultivate it successfully, it should be potted in chopped moss and boggy soil mixed, the pots well drained, and the plants carefully watered at all times: it requires to be covered with a bell-glass, and it must be allowed plenty of light, and a temperature of sixty-five or seventy degrees.

In the out-door department there is little at this season to attract attention, except the specimens in the arboretum, whose habits of growth may be successfully studied whilst the trees are in a leaf-less state.

Kew Botanic Garden .- At the same time I visited this establishment, and found the plants for the most part in good health; more especially the tribe of succulents, Many of the Cape and New Holland plants would, to a mere casual observer, perhaps, have the appearance of being old, badly grown, or neglected specimens, and this may probably in so large a collection be true, to a certain extent; but I believe it to result also in great measure from the circumstance, that great importance is attached to the individual plants, rather than to the species: thus when a new or valuable plant, is presented or sent to the establishment, it may be by some renowned Botanist, or Traveller, or, perhaps, imported from its native country, a living witness of the exertions of some enterprising collector; importance would appear to be attached to the individual plants so received, and their preservation made to be a decided object on account of the associations with which they are connected. In like manner plants raised from imported seeds, would be preserved to an indefinite period, on the same principle, in preference to propagating and obtaining young and vigorous growing plants. In the large conservatory are many splendid plants growing in large tubs, and presenting a noble appearance, and consisting of Melaleucas, Acacias, Banksias, and similar plants. Among the most interesting are several large plants of Araucaria, two plants of A. excelsa, have attained a large size and height, and by the graceful disposal of their branches present a truly fascinating appearance. A. Cunninghamii and Braziliense, though less both in size and

as regards their beauty, than those just mentioned, are still noble looking plants. In one of the houses is a splendid collection of Banksias and Dryandras, most of which have attained a considerable size, and appear to flower freely. The collection of Ericas, though small, are healthy plants. In a part of the garden near these is a magnificent specimen of Araucaria imbricata, protected by a portable wooden covering.

The collection of succulents is very extensive, and is well deserving of a minute examination. Some of the Opuntias have attained a great height, as also have many Cereus, Euphorbias, Aloes, &c. A greater amount of care would appear to be bestowed on these than on most of the other plants. The Ferns, of which tribe Mr. Smith is a devoted cultivator, are rather extensive, and the plants are mostly in a healthy state.

The provision here made for the reception of the greenhouse plants in summer is one worthy of much more extended imitation than it receives; for in my opinion, nothing is worse than the tasteless and careless masses in which such plants are generally placed. Here, the ground is disposed into convenient and elegant forms, and the edges of the beds defined by a neat brick curb; the plants are placed on coal ashes, and the walks are gravelled; thus the whole arrangement bears an aspect of neatness and order.

In the arboretum are to be found some noble and majestic specimens; and in this department are to be seen some of those evidences of neglect which recently excited public attention; much of this evil would appear to have arisen from the insufficiency of the means allowed for the keeping of the gardens, as well as from the regulations by which the persons employed were continually engaged with the visitors. This regulation is now done away with, and visitors are permitted to walk through the garden unattended; besides the advantage resulting from this, by affording greater opportunity for forwarding the work; we think it much more agreeable to the feelings of the visitors themselves to follow their own inclinations, in minutely examining the various plants before them, or wandering along the shady walks, and reflecting on the various forms of vegetation on either hand.

Messrs. Chandler and Son, Vauxhall, Nov. 24th.—The show of Chrysanthemums at this establishment, has, during the past season, been remarkably fine; and it were only necessary to witness this gorgeous display, in order to appreciate fully the merits of this deserving, though hitherto neglected flower. What, though its blossoms cannot boast of symmetry equal to that to which the Dahlia has been brought, it has higher claims, as regards both a more graceful habit, and manner of flowering; the perfect symmetry and regular disposal

of the petals of a Dahlia, may be desirable, and even indispensible in the eye of a florist; but it is not the flowers which possess these properties, in the highest degree that are held in most estimation by those who cultivate flowers for the sake of their beauty and showy qualities; and, therefore, why should not the free, open, and expanded form of the Chrysanthemum, be esteemed equally, and, as it ought to be, more highly than the finest Dahlia? I would not desire to check the progress of improvement in this or in any other flower; much has already been done, and much more may be done in obtaining brighter and more distinct colours, and increased size and fulness: but I should be sorry to see the varieties of Chrysanthemum with expanded and tasselled flowers neglected, and their position supplied by Dahlias, however beautiful.

It may, perhaps, be thought unnecessary to enter on the cultivation of this family; as, however, there are many modes of treatment, I will briefly describe that which I regard as the most successful in obtaining a fine bloom. The plan I would recommend is as follows: -About the end of March or beginning of April, take off the cuttings, choosing the young shoots, about three or four inches in length, strike them under a hand-glass, or in a frame in very moderate heat; pot them off into sixty-sized pots as soon as well rooted, and place them near the glass in a close cold frame, for a week or two: gradually harden them, to endure full exposure by the middle or end of May. Their position during the summer must be in a spot fully open to the sun; they must be kept quite thin, and the pots plunged in a bed of coal ashes; once or twice, when quite young, they must be topped to produce a bushy habit, but on no account should this be done at an advanced period. During the summer, and until the flower buds show, they must be watered just enough to keep them in a growing state, but after the buds are formed, water must be supplied more liberally; in this situation they remain until the end of September, after which time the protection of a glass-house becomes desirable: here they must not be crowded, but well supplied with water, and abundance of air admitted. The flower buds may or may not be thinned, at the option of the cultivator; in the one case the flowers will be more numerous, and in the other they will be individually much finer. As regards potting, they should be shifted at intervals, as they may seem to require it, but generally about four times during the summer will be sufficient; the last shifting should take place about the beginning of September, from which time the supply of food must be maintained by the application of liquid manure occasionally, and by repeated waterings. The compost I would recommend, is turfy loam, of a middling texture, enriched by the addition of about onethird well reduced manure. After blooming, the plants should be

cut down, and the pots taken and laid on their sides, at the foot of a wall, having a north aspect, laying them near each other, and covering them, in severe weather, with long litter or fern. By the end of February, they may be removed to the foot of a south wall, and a little water given; in this place they will produce their cuttings, after which they may either be destroyed or planted out.

The rearing of seedlings, although a desirable object, is one in the practice of which we cannot vie with our more favoured neighbours in the Channel Isles and on the Continent. In Jersey, many of the first new varieties were raised, and subsequently the attention of the French florists appear to have been turned that way, the greater number of the newest kinds having been imported from thence.

The following kinds were selected from the collection of Messrs. Chandler, as being desirable varieties:—

Arago-Orange, tinged with red, full, flat petals. Adventure-Yellow, fine double expanded flower. Beauty-Very light blush or lilac, flower expanded. Bicolor-White, back of flower tinged with yellow, form neat. Colonel Combes-Light orange red, large flower, incurved petals. Celestial-Blush, very double, in the way of "Queen." Conductor-Yellowish-orange, ranunculus form. Cassimir Perrier-Purplish crimson, petals broad and flat, showing a large yellow eye. Champion-Lemon-colour, petals recurved, flower full. Campestrina-Dark crimson, incurved, very double and regular. Conquerer-Whitish, a fine early variety. Compactum-White, ranunculus formed, a late variety. Chancellor-Centre of flower lemon, edged with pink, very large, quilled. Coronet-Creamy white, petals broad, very double. Duc de Calynian-Crimson, tinged with yellow, flower expanded. Diana-White, outer edge tinged with rose, petals incurved. Defiance-White, petals incurved. Elegans-Deep rosy-lilac, incurved petals. Empress-Pinkish-lilac, long, flat, expanded petals. Exquisite-White, broad, incurved petals, full compact flower. Floribundum-Pinkish-lilac, quilled, very distinct. Formosum-Creamy, changing to a fine white, petals incurved. Grand Napoleon-Dark-crimson, velvety, full, and well formed. Goliath-Light sulphur, or lemon-colour, incurved petals, very large. Gouvain St. Cyr.-Orange, marked with brownish crimson, very double. Gem-White, tinged with pink, petals broad. Insigne-Whitish, back of petals purplish lilac, petals broad, incurved. Invincible-Cream-colour, petals reflexed, very double. Isabella-White, back of petals yellowish, ranunculus form. King-Pink, petals incurved, flower full, and well formed. Leonora-Yellow, tinged at back with orange-pink, petals flat. Lucidum-Silvery white, petals incurved, flower very regular. La Superb-Rosy-pink, double.

2 c

Minerva-Blush, with pale centre, quilled, fine.

VOL. VI.

Maria-Bright red, broad expanded petals.

Mirabile-Creamy-white, centre deeper colour, petals broad, very double.

Madame Pompadour-Beautiful pink, very double.

Memnon-Light pink, petals broad, flowers in large clusters.

Magnet—Yellow, ranunculus form, blooms in clusters.

Ne plus ultra—Creamy white, petals beautifully incurved, forming a full double flower.

Perfection-Pinkish-blush, petals incurved.

Princess Maria-Light-pink, very double, ranunculus form.

Pulcherrimum-Deep-pink, petals broad, and double.

Phyllis-Lemon colour, petals flat.

Queen-Blush, petals broad, very double, flowers in large clusters.

Sultana-Dark crimson, fine.

Striatum-Pinkish, petals incurved.

Theresa-Reddish-orange, petals broad.

Triumphant-White, back of petals pinkish, centre buff, very double.

Vesta-White, tinted with lilac, petals broad, flower large and full.

ON THE CULTIVATION OF GREENHOUSE PLANTS.

BY S.

Templetonia.—There are but two species of this genus. They are natives of New Holland; and, when in flower, (which occurs in April and May,) they form no small ornament to the greenhouse. Their rich crimson flowers, and dark green foliage, will always insure them a place among our most choice and interesting plants. The soil most suited for them is good turfy peat, well broken with the spade, but not sifted, to which should be added a small quantity of sand. In fact, no mould of any sort should be sifted for greenhouse plants; for if mould is sifted, the very best part is discarded, namely, the fibre; it is also apt to clod in the pots, and will not let the water escape freely through it; and no plant can ever thrive, unless the mould is open, and will admit of the free passage of the water through it. In potting, (which, if possible, should be done early in April,) never give the plants a shift into a pot more than a size larger, and that only when they have filled their pots well with roots. If they have not a good share of roots, after having looked to the drainage, replace them in the same pot, and fresh surface them; but when the plants are turned out, if it is seen that the roots are few, the mould sodden, or any of the roots decayed, in such cases, as much of the mould as possible must be rubbed off without injuring the fibres, and any dead roots should be cut clean away, and the plants then potted into as small a sized pot as possible, which for these, as well as for the healthy plants, should be well drained with broken crocks and sphagnum, and the mould made quite firm about their roots. They should then be tied to neat stakes, and the healthy plants placed in a cool and airy part of the

greenhouse; and they never should be crowded among other plants. Greenhouse plants, no matter what kind, should never be crowded together, as is very often the case. No one plant should touch another, but they should be all quite free; for it is much better to see one good specimen than half a dozen bad ones, with only one or two branches, and a few leaves on the top, drawn up, perhaps, two, three, or four feet in height. The delicate and sickly plants should be placed on a cool shelf, in the propagating house, if such is at hand; if not, they must be placed in a close part of the greenhouse, and not exposed to a current of air. They should, however, enjoy plenty of light, and be shaded from the powerful rays of the mid-day sun. Templetonias, as well as all hard-wooded Cape and Australian plants, are much better kept in the houses during summer, provided they are not crowded, and enjoy a free circulation of air, and are shaded, a few hours each day during summer from the scorching rays of the sun. The greatest caution is required in watering, but in this no general rule can be given, as much will depend on the time of the year, state of the weather, &c:; they should, however, be watered in summer, as soon as the surface of the mould is dry: it is much better to water them often and give them a little at one time, than to water them seldom, and then drench them with it. Nothing can be more injurious than the latter method, for if the mould is allowed to get quite dry, or crack from the sides of the pots before water is given, it is sure to [seriously injure, if not totally kill them; neither should water be given until the surface is dry, as an excess of moisture is as detrimental, as too little. In winter the greatest judgment is necessary; it should, if possible, be kept in a medium state, and rather dry than otherwise, though the mould even at that season should never be allowed to get thoroughly dry. These remarks apply to the majority of hard-wooded greenhouse plants.

Templetonias strike tolerably freely from cuttings of the young tops, taken off about June or July, prepared about one inch long; in planting them, choose say a forty-eight sized pot, and fit a bellglass to it. It should then be filled to about one-third with broken pots, or sphagnum, for drainage, and the remainder to about one and a half inch of the top, should be filled with nearly equal parts of peat and sand, well mixed, the whole covered with clean silver sand, which should be pressed quite firm, and then receive a gentle watering; and after being allowed to soak, it should be pressed again quite firm; after which, the cuttings may be inserted about three quarters of an inch asunder, and the whole should receive a gentle watering; the cuttings should then be left to dry, after which the bell-glass should be placed over them, and then plunged in sand or saw-dust, in the propagating house, (but not in bottom heat, as it is

almost sure to kill them, as well as most other Australian plants.) They require looking over daily, and the glasses wiping, and any damp picked off; they should be watered when they require it, which should be done with a wide-mouthed bell-glass, which will not disturb the sand so much as the tube of a pot. Cuttings require also the greatest nicety in watering: they should, if possible, be kept in a medium state. The use of the mould under the sand is for the cuttings to strike into, as soon as they form roots, which they will do more freely than in pure sand. As soon as they have formed roots, which may in general be known by the cuttings beginning to grow, the glasses should be left off occasionally by night for about a week, after which they may be left off entirely; it will, however, sometimes happen that the cuttings will grow a little before they have formed roots, and when the glasses are left off, they immediately flag. If this is observed, they ought to be replaced, and kept quite close for a few days, which will generally recover them; but if they do not droop when the glasses have been left off in about a week or ten days, they may in general be petted, in doing which, the greatest care must be taken not to break any of the fibres. They should be potted separately in thumb pots, well drained, in nearly equal parts peat and sand, after which they must be kept quite close in the propagating house, until they make fresh roots and begin to grow; they may then be removed to an airy shelf in the greenhouse, or plunged in saw-dust, or peat, in a cool pit, during the first couple of summers, removing them to an airy shelf in the greenhouse during winter, and carefully attending them. For the second shifting, I recommend two-thirds peat and one-third sand; and for the succeeding shiftings the same as recommended for the old plants. If the above few brief remarks are attended to, good vigorous healthy plants will be the result, and their free blooming and neat habit will well repay the trouble taken of them.

ON THE CULTIVATION OF PERSIAN MELONS, IN POTS.

BY R. B. WILSON, NORTON, NEAR STOCKTON.

I beg leave to lay before your readers, a few remarks on the culture of the Persian varieties of Melon, as grown here in pots in the front of a Vinery; should you deem them worthy of a place in your Magazine, they may, perhaps, be the means of inducing some of your readers to commence the cultivation of this valuable family of Melons, who may have been deterred hitherto from doing so, under the impression that they are difficult to manage successfully, and

require a higher temperature, and a drier atmosphere than they will be found really to need: that these difficulties do not exist to the extent frequently represented, I am fully prepared to assert, having experienced in cultivating them, nothing beyond the ordinary chances of failure to which all crops are liable, and having met with an amount of success proportioned to that of care and assiduity bestowed on them. I have also found that they do not require such a humid soil as they are generally understood to do; for being protected only by a very thin skin, they are liable to crack, if too abundant a supply of water is given at the roots.

The soil that I use is the turf taken from a rich hazelly loam, to which I add a good proportion of old, and well decayed hot-bed manure; I give a good drainage, putting about four inches of bones roughly broken, into the bottoms of the pots, and covering that with a layer of broken turf, placed so as to prevent the soil washing down among the draining, and yet so lightly as to admit the ready egress of the water: on this turf, the grassy side of which should be kept downwards, the compost is placed. The sized pots I use are eighteen inches deep, eighteen diameter at top, and eleven inches at bottom, inside measure; I consider, however, that wooden boxes or tubs would be preferable, as the action of the sun on the sides of the pots, by producing a rapid evaporation, frequently occasions much injury to the plants by drying those roots which spread round the outside of the ball of earth. Wood being a non-conductor of heat, the employment of boxes would, in a great measure, prevent these effects: but probably a little moss, wrapt round the pots, and kept continually moist, would answer the end to its full extent.

My plants are raised at an early part of the season, and treated in the ordinary manner, except, however, in this particular; when intended for pot culture, the leading shoot must not be stopped, but trained to the full length required, and from this the fruit-bearing laterals will be produced. Most of the Persian varieties are great bearers, shewing abundance of fruit blossoms, but until the plants become fully established, none should be allowed to set, as nothing will be gained by endeavouring to procure fruit during the infant stages of the plant's growth; two fruit will be sufficient for one plant to bring to maturity, as they generally attain a considerable size. The sorts which I grow are the Green Gerger, and the Striped Hoosainee; the former a green-fleshed variety, and the latter, a beautiful green and vellow striped fruit, with pure white flesh. They are both oval-shaped, and grow from three to five pounds in weight, if two fruit only are allowed to come to maturity; on my plants I ripened three, and consequently my fruit were smaller, not weighing more than three pounds. A neighbour of mine, who grew the same sorts, but

allowed only two fruit to remain, succeeded in growing them to a larger size, and of rather a higher flavour than mine, although precisely the same course of treatment was followed in both cases. They were frequently watered with liquid manure whilst swelling their fruit, and sometimes slightly syringed over the foliage in the evening; the temperature of the house was kept up to suit the Vines, and the atmosphere continually damp, until the grapes commenced colouring. A very important feature in cultivating either Melons or Cucumbers in pots, either in Vineries or Pine-Stoves, is to commence growing them as early in the season as possible; the plants ought to be ready for their final shift into their fruiting pots, early in the month of April, otherwise, they are very liable to be attacked and seriously injured by thrips, red spiders, and similar insect enemies. Another important advantage gained by commencing early, is that of having the greatest amount of sun heat, about the time the fruit is ripening; an advantage which those only who have had to do with the ripening of tender fruit of any kind, will know how to appreciate to its full extent.

In order that your readers may not be led to imagine that I am assuming to be more conversant with the subject than I have any pretensions to be, I must explicitly tell them that I have only been a cultivator of Persian Melons, in pots, during one season; in that time, however, I have paid some degree of attention to their habits, and the above is the result of my observations.

Several of the less tender varieties I have for some time grown on dung beds, in the ordinary manner, and I have found them to succeed well. The kinds referred to are, the Sweet Melon of Ispahan, Gerger, and Salonica. The more delicate kinds, as the Striped Hoosainee, Melon of Keising, and the Kurchaing, require either to be grown in pots, or if cultivated in pits, or on dung beds, a trellis must be provided so as to elevate and support them a few inches from the soil. This may be readily done by fastening laths or strips of wood across the frame or pit, at about six inches apart, and at any required height above the soil. By these means, any of the Persian varieties may be grown with no greater amount of trouble than is ordinarily bestowed in the successful cultivation of the European varieties; the greatest distinction being, that I use rather a richer soil for the former, than for the latter.

P.S. In my paper on the Melon, vol. v. p. 226, what I take to be an error of the press, makes me to recommend the depth of soil to be one foot;—this ought to have been printed two feet, a depth of soil being of importance in the culture of Melons.

(We are much obliged to our correspondent, for the remarks contained in the above paper; and make no doubt they will be found useful to many of our

readers. The cultivation of the varieties of Persian Melon we have always regarded as a subject possessing much greater interest than is usually attached to it; and we think the above sound remarks cannot fail to be of service in promoting their cultivation. In establishments where the convenience might be obtained, a small house, devoted to the growth of Melons, would be found of great use, when those fruit were wanted, either at a very early or late period. We do not mean to imply that melons may be grown better in this way than on dung beds, where proper convenience can be had; but in cases where the supply of hot dung is but limited, and also in the early part of the season, when severe weather may frequently occur, we think that both melons and cucumbers may be grown with far less trouble and risk in small houses, heated by an hot-water apparatus. In short, we think that pits heated in this way, may be made to answer every purpose equally well as those heated by the application of dung casings; at the same time, much litter and confusion, as well as labour, will necessarily be avoided, and the requisite temperature kept up with far less risk of damage arising from fluctuation of heat, in times of severe or sudden frosts. A few pots, either of Melons or Cucumbers, might often be introduced both into pine-stoves and vineries, without at all interfering with the regular crops.]-Ep.

ON THE CULTIVATION OF THE PYRAMIDAL COX-COMB.—(Crlosia pyramidalis.)

BY JOHN SMITH, UNDER GARDENER, RICKERBY HOUSE.

This species, when full grown, resembles a pyramid of five feet in height, surmounted by a comb, which measures one foot in length. The lowest laterals are about three feet long, with combs about six inches in length. The laterals and combs gradually diminish in length and size, until they merge in the main comb at the top. There are between seventy and eighty combs on each plant, measuring from six inches to two inches, besides the main comb. The laterals are besides studded with innumerable variety of small combs along their edges. The whole together forming a splendid pyramid of coxcombs. It should be sown about the beginning of April, in pots, in a pine-pit or melon-frame, and the plants transplanted into fourinch pots, when they are about three inches high. They should then be plunged into a melon-frame, where the heat is not less than seventy degrees during the night. They should afterwards be shifted into six, eight, and ultimately into twelve inch pots, according to their growth. When they become too tall for the frame, they should be placed in the stove, or into any pit, where the requisite temperature is kept up. The soil in which I have grown them is composed of one-quarter rotten horse dung, one-quarter rotten sheep dung, originally gathered from pasture land, one-quarter loam, and one-quarter sand. When the plants grow large, they should be watered once a week with liquid manure from sheep dung, well diluted with water in

proportion to its strength. Were the surface of the pots covered at the same time with rotten manure, it would also be an advantage to the plants, as preserving a more equable degree of moisture. If so treated, they will come into flower about the beginning of October.

REFERENCE TO PLATE LXX.

MARTYNIA FRAGRANS, Fragrant Martynia.

NAT. ORD. PEDALIACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This very beautiful and highly fragrant plant is a native of Mexico, and in 1840 was raised by Miss Harvey, of Hayle, in Cornwall, from seeds received from a correspondent of hers, in Real del Monte. Through the kindness of a friend, (Mr. Rawlings), to whom Miss Harvey had given a plant, we were favoured with a specimen in the summer of that year, and which, when we received it, was just coming into bloom; although it was injured by a journey of nearly three hundred miles, yet it continued to growly freely and flower finely, until late in the autumn.

It is an annual, having large angular cordate leaves, and bears a spike of six or eight flowers on the summit of the stem; lateral branches are then produced from the base of the flower spike, and these again bear flowers, and produce lateral branches: growing in this way it attains the height of three feet and upwards, and about the same in diameter. The seeds are produced in large, curved, downy, hard, horned vessels; an outline of one is represented in the back ground of the annexed figure, and when full grown and perfect, contains about fifteen seeds, which are rough, oval, and flattened, of a derk or blackish colour. This species possesses a remarkable peculiarity, for, like the Mimulus, its divided stigma collapses on the slightest touch.

From the appearance of the plant, on our first receiving it, we thought it would require the temperature of a stove; but not realising our expectations in that situation, it was removed to an open frame, where it remained exposed night and day during the remainder of the summer, and being thus only protected from high winds, it grew finely.

We recommend it to be raised in the spring upon a moderate hotbed, to be potted in a rich soil, and as it grows rapidly, it should be frequently and carefully shifted, neatly staked, and kept near the glass; it must be cautiously watered, and may be ultimately removed to a warm and light greenhouse, to perfect its inflorescence; thus, with the treatment usually given to Balsams, and similar plants, it will richly repay the attention bestowed upon it, as there are few flowers more beautiful and fragrant, than the subject of these remarks.

Two or three plants were raised last year with some hardy Californian annuals. In the open ground, they flowered more beautifully (in colour), than those under glass, but not so finely or freely; this proves that it will grow in the open border, and, doubtless, when it becomes plentiful, it will be esteemed as a valuable ornament there; but we would recommend it to be raised under glass, and be gradually inured to the air, in the way half-hardy plants are usually managed, before they are planted out in exposed situations.

We have found this plant to be rather shy in maturing its seeds, and, consequently, our stock of it is very limited. Plants of it will be sent out during the present spring. (See advertisement on the cover.)

The generic name is given in honour of the late John Martyn, F.R.S., professor of Botany, at Cambridge, who died in 1766. The specific appellation relates to the odour of the flowers, and was given by Dr. Lindley.



ro veili Algerie iaŭ

NOTICES OF NEW PLANTS.

GLOSSOCOMIA OVATA, Ovate Pouchbele.

[Bot. Reg .

NAT. ORD. CAMPANULACE ... CLASS PENTANDRIA MONOGYNIA.

A pretty hardy perennial, with spindle-shaped roots, half climbing stems, and cordate ovate leaves; the flowers are pale coloured, and resemble in shape those of a Campanula. It flourishes in any good garden soil, flowering in July, and attaining about one and a half feet in height. " There exists in the North of India a race of half-climbing feetid, soft, milky plants, with campanulate flowers, dull coloured, like those of Atropa, and evidently uniting the Campanulaceous and Solanaceous orders. By Dr. Wallich, they were placed in a genus he called Codonopsis, in which he was followed by M. Alphonse De Candolle, and Mr. Bentham; subsequently De Candolle transferred them to Wahlenbergia, forming them into a section under G. Don's name of Megasanthes. Nothing, however, can be more unnatural than to mix up these fœtid, soft-leaved, scandent lurid plants, with Wahlenbergia, which in all its habits more resembles the little Cape Lobelias; as little can it be permitted that the name Megasanthes, first propounded in a work of no botanical authority, should take precedence of the much older name Glossocomia, applied about twenty years ago to one of the species, afterwards merged into Codonopsis, and now again separated."

LESCHENAULTIA BILOBA, two-lobed Leschenaultia.

Bot. Reg.

NAT. ORD. GOODENIACEÆ. CLASS PENTANDRIA MONOGYNIA.

We mention the plant again for the sake of noticing the following:—" By one of those unfortunate coincidences, which now and then occur, the last volume of De Candolle's Prodomus, containing Goodeniaceæ and Stylidiaceæ, was published about the same time as the Sketch of the Vegetation of the Swan River Colony; and hence many plants noticed in the one, are described under different names in the other." The "Sketch" appears to have a slight priority of publication, and, therefore, according to the usages of botanists, its names will stand; the present plant is L. grandiflora, of De Candolle. The grandiflora of Dr. Lindley is, however, a distinct species, which appears from dried specimens to be loaded with much larger blossoms than those of L. biloba, and of the same colour.

LYSIMACHIA LOBELIOIDES, Lobelia-like Loosestrife.

Bot. Reg.

NAT. ORD. PRIMULACEÆ. CLASS PENTANDRIA MONOGYNIA.

A hardy perennial adapted for rockwork, said to have been collected in Cashmere; it is also produced in Nepal, Kamaon, and other districts of Northern India. The flowers are white, simple, and scented, produced on long terminal spikes; it flowers throughout summer and autumn.

NIPHŒA OBLONGA, Oblong Snow-wort.

Bot. Reg.

NAT. ORD. GESNERACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

A very pretty herbaceous stove plant, from Guatemala, remarkable among Gesneraceous plants for its pure white flowers; and being distinct in its structure from all the other genera of the order, it requires a temperature between that of a stove and greenhouse, and flourishes in light rich soil. It flowers in autumn and winter, after which the stems die off, and the plant remains dormant until the following season: whilst in this state it should be kept quite dry, until its

VOL. VI. 2 D

resting season is past, when it may be re-potted, and liberally supplied with water. It forms a quantity of imbricated scaly buds, both on the surface and under ground, by which means it may easily be multiplied in the same way as Achimenes.

CATTLEYA GRANULOSA, Rough-lipped Cattleya.

Bot. Reg.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This is, at present, the rarest of the genus, a single small specimen having been sent by Mr. Hartweg, from Guatemala, without any intimation as to its native habits. When it blossomed, only one flower was formed, the sepals of which were two and a half inches long, oblong, olive green, mottled with brown spots; the petals were of the same colour, ovate, rounded at the point, narrowed at the base, and waved at the margin; the lip is of a pure white at the sides and point, and of a glowing orange, spotted with crimson in the middle. Like other Guatemalean Orchidaceæ, this is much injured by excessive heat and moisture; a night temperature of 55 degrees in winter, and 60 degrees in summer, being quite sufficient for it.

ONCIDIUM LONGIFOLIUM, Long-leaved Oncidium.

Bot. Reg.

NAT. ORD. ORCHIDACE E. CLASS GYNANDRIA MONANDRIA.

A species allied to O. Cebolleta, under which name many different species and varieties exist in our gardens. O. longifolium is one of the finest of these, forming dense pauicles, three feet long, of very large and showy yellow and brown flowers; its leaves are often three feet long, and hang down, or spread on the ground, instead of standing stiff and erect. In cultivation, it requires a warm damp atmosphere, where such as Cattleyas, Læinas, and Stanhopeas flourish. A temperature ranging from 55 to 65 degrees, with artificial heat, will be sufficient. It will grow very well amongst turfy peat, in a pot; but it is preferable to suspenit in a forked block of wood, allowing its long leaves to hang down gracefully, as they do in its native woods; when grown in this way, they must be firmly fixed to the block, and the roots covered with sphagnum, and well watered when growing.

The following species form with this, the section Cebolleteæ, of the genus:—
O. brachyphyllum, Mexico, with stiff short leaves; O. adscendens, Guatemala;
O. nudum; O. Cellobeta, of which there are many varieties.

STUARTIA PENTAGYNA, Five-styled Stuartia.

Bot. Mag.

NAT. ORD. TERNSTRŒMIACEÆ. CLASS MONADELPHIA POLYANDRIA.

A hardy shrub, cultivated in the country long before 1785; it attains from eight to ten feet in height, with ovate leaves, and single creamy white flowers, resembling those of a fine single rose. It is the Malachodendron ovatum of various authors, but is united with Stuartia, by Drs. Torrey and Gray, following Sir J. E. Smith. It is an inhabitant of Carolina and Georgia, flowering in July and August.

AQUILEGIA SKINNERI, Mr. Skinner's Columbine.

Bot. Mag.

NAT. ORD. RANUNCULACEÆ. CLASS POLYANDRIA PENTAGYNIA.

A most beautiful species of Columbine, sent from Guatemala to Woburn Abbey, by G. V. Skinner, Esq., and found to be perfectly hardy. It is a perennial, with a flower stem two to three feet high; the sepals are green; the Jimb of the petals yellow, prolonged into a bright red spur, nearly two inches in length. With the exception of the A. cornlen, of Torrey; it is, perhaps, the finest of the genus yet known.

NELUMBIUM SPECIOSUM, VAR., Sacred Bean of India.

| Bot. Mag.

NAT. ORD. NELUMBIACEÆ. CLASS POLYANDRIA POLYGYNIA.

In July and August, 1841, this plant flowered freely in the gardens at Syon; the petioles rising to the height of four feet, and the peduncles to that of six feet, terminated respectively by their ample foliage and blossoms. "On our visiting Syon Gardens a second time," says Sir W. J. Hooker, "in company with Baron Hugel, when the fruit had almost come to maturity, that distinguished botanist and traveller, observed, that in that state the nuts are generally eaten in Hindoostan, at the dessert, and have an agreeable flavour, not unlike that of filberts." Dr. Wight also remarks, that both in the East Indies and in China the creeping root-like stems and nuts are used as food. The leaf and flower stalks too, he tells us, abound in spiral tubes, more loosely combined, and perhaps, stronger than the same vessels in most other vascular plants. These in the southern provinces of India are extracted with great care, by breaking the stems, and gently drawing apart their ends; long pieces of the spiral filament are thus uncoiled, and from these filaments are prepared those wicks, which, on great and solemn occasions, are burnt in the lamps of the Hindoos, and placed before the shrines of their Gods. Similar wicks are formed of the spiral tubes of some Nymphæas, but they are not thought so sacred.

PODOTHECA GNAPHALIOIDES, Cudweed Podotheca.

Bot. Mag.

NAT. ORD, COMPOSITÆ. CLASS SYNGENESIA ÆQUALIS.

A Swan River annual, with linear lanceolate leaves. The flowers are in solitary terminal heads; the involucre conical, an inch and a half long; the flowers yellow, longer than the involucre, and forming a spheroidal head at its apex.

OTOCHILUS FUSCA, Brownish-flowered Otochilus.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A singular, but by no means showy epiphyte, inhabiting the trunks of trees in Nepal. Its flowers are white with a faint tinge of flesh colour.

ONCIDIUM INSLEAYII, Mr. Insleay's Oncidium.

Paxton's Mag

NAT. ORD. ORCHIDACEE. CLASS GYNANDRIA MONANDRIA.

A very beautiful species, resembling very closely Odontoglossum grande. The flowers are of a large size, and possess great richness in their colouring, which is, nevertheless, very similar in its combination of brown and yellow tints, with many others of the genus. It was introduced by G. Barker, Esq., of Birmingham, from Oaxaca, in Mexico, and named by him after his gardener Mr. Insleay; subsequently Messrs. Loddige's have imported it from the same country.

HARDENBERGIA MACROPHYLLA, Broad-leaved Hardenbergia.

Paxton's Mag.

NAT. ORD. LEGUMINOSER. CLASS DIADELPHIA DECANDRIA.

A climbing Swan River shrub, sent to this country in 1835, by Sir James Stirling, and raised in the garden of R. Mangles, Esq., of Sunning-Hill. It has something the habit of the old Kennedya, (now Hardenbergia Comptoniana,) but appears to differ in having broader leaves, and denser branching racemes of its deep blue flowers. It is a vigorous growing plant, and seems to be best adapted for planting out in a conservatory; in such a situation it has grown and flowers splendidly with Mr. Kyle, gardener to R. Barclay, Esq., of Leyton, Essex.

BEAUFORTIA DECASSUTA, Cross-leaved Beaufortia. [Paxton's Mag.

NAT. ORD. MYRTACEÆ. CLASS POLYADELPHIA POLYANDRIA.

A very old but exceedingly beautiful greenhouse shrub, flowering throughout the gloomy months of winter, and, therefore, especially valuable. The delicate crimson stamens of the flowers, stand out in all directions from the stem, which they encircle, and present when fully expanded the appearance of a bottle brush. The foliage of the plant is also neat and elegant, and the rather straggling habit of the plant may be overcome by a little attention in training the branches. It requires the usual treatment given to New Holland plants.

GESNERA ZEBRINA, Zebra-leaved Gesnera.

[Paxton's Mag.

NAT. ORD. GESNEBACEE. CLASS DIDYNAMIA ANGIOSPERMIA.

This fine species is apparently an herbaceous perennial, producing its flowers in October, November, and December; these are of an orange-red colour above, and pale orange beneath, the interior and the throat being spotted with red. It produces stout succulent stems, which generally attain six or eight inches before the flower spike is protruded from their summit; this latter rises perpendicularly from the stem three or four inches, above which the lovely blossoms are spread out on long slender stalks, and continue to be produced indefinitely until the height of a foot or eighteen inches is attained, there still being an equal number of buds at the top; lateral shoots are also produced from near the base. The leaves are of a rich lively green, the veinings being of a purplish tint, and the whole having a velvety appearance. It is a stove plant, and as far as its babits are ascertained, it requires a similar mode of treatment to that pursued with the other kinds.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

SPIRÆA FISSA.

This new hardy shrub has now flowered, and proves to be the Spiræa argentia, of Mr. Bentham's Planta Hartwegiama; it is, however, different from the plant so called from New Grenada. The flowers are small, in loose panicles, by no means handsome, although it forms a good looking bush.

EPIDENDRUM POLYANTHUM.

A specimen of this species sent by Mr. Hartweg, from Guatemala, has lately flowered in the Horticultural Gardens; the flowers are rich salmon colour. In consequence of examining an imperfect specimen of this species, Dr. Lindley regarding it as new, named it E. bisetum; this name, therefore, must be cancelled.

ERIA PROFUSA.

A species of little beauty, sent from Ceylon to the gardens at Syon.

SACCOLABIUM OC RACEUM.

A native of Ceylon, with small ochrey yellow flowers, marked with transverse broken bands of dull red. It has much the appearance of Cleriostoma maculosum, but is a true Saccolabium.

BARKERIA LINDLEYANA.

This beautiful plant has exactly the appearance of Epidendrum Skinnerii, with which, at first sight, it might be confounded. It is a native of Costa Rica,

whence it was sent to Mr. Bateman by Mr. Skinner. The former gentleman states that "it has been fully seven weeks in flower, and yet the blossoms first opened are as fresh as ever, a case quite without parallel among orchidaceous flowers of its colour."

DENDROBIUM DISCOLOR.

The plant published in *Bot. Reg.*, at tab. 38, 1841, under this name, and noticed at our pages 258, vol. 5, and 112, vol. 6, is the same as D. undulatum, found by Dr. Brown on the north coast of New Holland; the name undulatum must, therefore, be substituted for that of discolor.

ONCIDIUM PERGAMENEUM.

A pretty species, with yellow and brown flowers, found by Mr. Hartweg, at Medio Monte, in Guatemala.

ONCIDIUM SUTTONI.

A distinct species, from the same locality as the last, named by Mr. Bateman in compliment to Capt. Sutton, R.N., who has brought so many valuable plants from America to England. In the flowers of this species, the sepals and petals are of a dull olive brown without any spots, except at the point, where they are yellow, while the lip has also but one dull olive brown spot occupying the centre of its base.

MINA LOBATA.

This is a convolvulaceous plant of much beauty, and more singularity; for it we are indebted to G. F. Dickson, Esq., who presented its seeds to the Earl of Burlington, and by whom they were presented to the Horticultural Society, in whose collection only the plant is at present known to be cultivated. Mr. Wilson, gardener to the Earl of Burlington succeeded in raising a single specimen last year, which produced its curious flowers in November. The habit of the plant is quite that of a crimson, lobed-leaved Ipomæa, but the flowers grow in forked erect racemes, without any of the aspect of a Convolvulus; at first they are deep crimson, but when expanded they are of a pale lemon colour. "By all modern authors this genus, Mina, is regarded as synonymous with Exogonium, an error which must have arisen from the plant itself not having been seen; it is in reality quite a distinct form of the convolvulaceous order. According to modern authors, it is cultivated by the Mexicans for the beauty of its flowers. It will, doubtless, be a greenhouse plant.

MISCELLANIES.

Carica Paraya.—The papaw tree is a native of India and South America; it is one of those kind of plants whose male and female flowers grow on separate individuals, and consequently the proximity and intermixture of both male and female is necessary to secure the production of fruit. The fruit are melon shaped, each weighing from one and a half to two pounds; they are caten with pepper and sugar, and when half grown, if properly pickled, are scarcely inferior to the pickled mange of the East Indies. The acrid milky juice of the plant, when rubbed over newly killed animals, is said to render the flesh very tender in a short time; and even if the meat be hung up in the tree for a certain period, the same effect will be produced.

In the Botanic Garden, Kew, many of the Ferns, and other stove herbaceous plants, of dwarf habit, are grown in wide and very shallow pots, such as those usually employed for cuttings; this plan would seem to be well adapted to such plants, as well as to delicate rooted ones, allowing, as it does, a more free and extended range to those organs, besides keeping them more within the influence of the atmosphere, then when forced downwards, into a mass of soil, by the circumscribed area of the pots.

Oxalis Deppel, as well as some others of the genus, is well adapted to cultivation, as a delicate vegetable. It produces roots generally attaining a size equal to that of an ordinary kidney-potatoe; it is said to possess a very delicate flavour, resembling, or even superior to asparague, is of easy digestion, and agreeing with the most delicate stomach. Professor Morren states that from the analogy of the root with salep, its effects should be excellent on all constitutions. It should be cultivated in a sandy warm soil.

At this season, the dressing of Peach Trees will be an operation shortly requiring attention; the scale, and other insects, attaching themseves to the bark, are stated by Mr. Kyle, in the Gardener's Chronicle, to be readily removed by painting over the trees with diluted clay; two coats of this paint should be given, and the trees protected from rain for about a fortnight; the clay on dropping off will bring the insects with it.

The species of Passiflora are admirably adapted for stove and greenhouse climbers, being of easy culture, free growers, and if allowed plenty of room produce abundance of beautiful flowers; many of the kinds produce fruit freely, from which through impregnation several fine hybrids have been raised. The fruit of some as P. edulis, layrifolia, and quadrangularis, or Granadilla, are eaten. The succulent pulp which surrounds the seeds, is fragrant, cooling, and pleasant; agreably acid, and admirably adapted for allaying thirst in hot climates. P. quadrangularis, or the Granadilla, bears fruit resembling a large lime (Citrus Limetra,) and to cause it to produce them in abundance, should be treated as follows :- Plant it in a large box, or in a partitioned-off corner of a stove, or a tan pit; if, in the latter, holes may be bored in the sides, to admit the ready egress of the roots. The shoots should be trained parallel to the glass as vines, and treated similar to melons; that is, the most vigorous shoots removed, as they will be found not to bear so freely as those of a moderate growth. It will generally be found necessary to set the fruit by artificial impregnation, taking care to supply the plant with abundance of water .- Parton's Botanical Dictionary.

In a letter received from Mr. Seymour, since the publication of his remarks on Glazing, at page 156, he requests us to state, that the size recommended for pits should be six-and half inches, by three inches deep, instead of four-and three-quarters by three inches: panes, six inches by three, would also be found a convenient size. The occasion of many of the panes being split up the middle, as there mentioned, is entirely owing to their being put in too tight. It is desirable always to glaze with what the glazier's term the "bent side" of the glass downwards, as by this case, the glass lays more even and close in the middle.

Roots, like timber, are formed in proportion to the quantity of foliage, and to the space a tree has to grow in. A tree, whose trunk is divided into limbs, loaded with healthy leaves, fixes itself to the soil by gigantic roots, which hold it immoveably, and help it to defy the storm. But, a tree drawn up to a pole, with

a few limbs at the summit, has neither the means of forming roots, or the space to develope them; a few fibres are all it produces, bearing no proportion to the head; and the moment the protection of the trees around it is withdrawn, it necessarily falls over.—Gard. Chron.

In small collections, where few cuttings of any individual plants are required to be propagated, some discretion ought to be observed in selecting such as agree most nearly in habits, to be placed in the same pot; for if this be not attended to, a difficulty will arise in potting them off, as some kinds will root much sooner than others, and the process of removing them may be attended with some chance of injuring those which may not be so far advanced.

Greenhouse plants should be shifted at least once a year, many of them oftener, according to their habits of growth, or the purpose for which they may be intended. There is one very general, and very great fault, in shifting plants, and that is, placing them in too large pots. We know of no other role that can be at all considered, as bearing on the case, or which we have words to explain, other than proportioning the size of the pot, to the number, size, and form of the roots. Thus, a Heath, or Azalea, will require a much less pot to grow in, than a Pælonia, or Fuchsia, of the same size, and such plants as Chrysanthemum, and Calceolarias, that require to be grown rapidly, to increase the number and size of their flowers; and also those which are only herbaceous, that is producing a fresh volume of herb annually, require much larger pots than the slender rooted Selago, or Chironia. Instead of calculating by the number or nature of the roots, it is too general a practice to calculate by the size of the plant only.—M' Intosh.

There are two distinct states in the existence of every plant; one, of quietude and repose; the other, of development and display. The plants which are cultivated in hothouses, are chiefly natives of tropical climates, and an idea has prevailed with many that they require an undiminished heat of from sixty degrees to seventy degrees Fahrenheit. If it be supposed, that these high degrees of temperature exist at all seasons in hot countries, a great mistake is committed; for even in the torrid zone, within a few degrees north or south of the line, severe cold is frequently experienced; and in the hilly districts, unequivocal proofs of actual frosts is sometimes afforded. The pine-apple, a plant which flourishes with prodigious luxuriance in the pestilential vaporous atmosphere of Batavia, and in the close woods of Western Africa, bearing the utmost extreme of heat, will, nevertheless, sustain a degree of cold below that of the mean temperature of our climate, in February, without manifest injury. Beauty, perpetual verdure, and floral developments, cannot be forced; plants will not grow at all seasons, Repose and sleep are required by all created things; and he who endeavours to keep up by heat-during darkness, gloom, and frost-those effects of vital action which depend on light and solar influence, must effect his object at the expense of those stores of supply, which have been accumulated for the production of the fresh organs and developements in the ensuing spring .- Weekly Chronicle.

MONTHLY CALENDAR.

FLOWER GARDEN.—The attention of the cultivator will now be called into more active exercise, his bed and borders of herbaceous plants should be carefully

forked up, and in mild weather, the plants may be removed or transplanted, if desirable. Towards the end of the month, a few annuals may be sown in light dry soil, for early blooming; if carefully nursed and attended to, they may succeed. Manure and make up beds intended for grouping plants in summer, if not already done; remove the coverings which may have been placed over delicate plants, gradually at first, so as not to injure them by too sudden an exposure; box edging may be planted, and lawns and grass walks and verges formed; gravel walks may also be made, edgings of grass should be neatly cut with the edging iron; roll and sweep regularly.

PLANT STOVE .- Many plants will toward the end of the month be showing symptoms of growth; this, when observed, should be encouraged by shifting, and duly watering: bulbous and tuberous rooted plants, such as gesneras, gloxinias, &c., will also be vegetating, and should receive attention. Prune and tie up creepers; attend to propagation, both by seeds and cuttings, and use every means to rid the plants of insects before the new growth commences: whilst all those plants which are beginning to grow should be encouraged. The application of both heat and moisture should be sparing in the case of those which are still dormant. Orchidaceous plants will many of them require repotting; but no excitement should be given to those which are still at rest. This is the best season for sowing

seeds received from tropical countries.

GREENHOUSE.—The same remarks apply as regards repotting and watering plants, these operations not being delayed when the plants naturally commence growing; in order, however, to prevent undue excitement, use no fire heat, unless to protect from frost, and admit as much air as possible. Remove dead leaves, and every thing bearing the appearance of carelessness or confusion, and let perfect order and good keeping prevail, not only in this, but in every other department; propagate by seeds and cuttings. The regular succession of forced flowers still demand attention:

KITCHEN AND FRUIT GARDEN .- Sow early frame peas, and towards the end of the month some of the larger kinds, and a few mazagan beans. Also, about the middle of the month, sow cabbage for a summer crop, cauliflower, savoy, &c., leeks, celery, round spinach, and parsley, in small quantities, and a full crop of onions; also, on a warm border, early Dutch turnips, horn carrot, lettuce, and radishes; the three latter may also be sown on a slight hotbed. Plant shallots. garlic, Jerusalem artichokes, horse-radish, and all kinds of herbs. Prepare ground for various crops next month. In mild weather, plant all kinds of fruit trees, mulch them, and stake such as need it; prune and train peaches, and other fruit trees, and dress the borders. Plant and dress beds of strawberries. (See last Montb.)

FORCING GARDEN.-In the pine stove, a slight increase of heat and moisture is desirable, especially for those intended to fruit early. Vineries, in which forcing is commenced, require very regular attention; the remarks made last month are still suitable, as well as those applying to peach-houses. Strawberries in pots should now be introduced in successional order, placing them at first in a slightly elevated temperature, and removing them to warmer situations as they advance. Cucumbers will now succeed well, if duly attended; potatoes should be planted on hotbeds in succession; sea-cale should be covered up with leaves and dang, and some placed in the mushroom house; radishes should be sown on hotbeds, and a succession maintained. Mushroom beds should be made up and spawned.

PLEASURE GROUNDS, &c.-Plant shrubs and trees; operations on ground and water may be prosecuted, in suitable weather.

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXX.-MARCH, 1842,

ON THE TRANSPLANTATION OF TREES AND SHRUBS. BY T. MOORE.

Transplantation, or the removal of a growing plant from one situation to another, is an operation which almost every person must have witnessed, and have some idea of its nature. To the uninitiated, it may appear to be a very simple process to dig up a plant growing in one part of a garden, and to remove and to replant it in another; manual labour, in a degree proportioned to the size of the plant operated on, may appear to them to be all that is required, in order to ensure a successful issue: and, doubtless, there are many plants, in which the vital principle is so tenaciously fixed, that they would be found to succeed, even though their removal were effected in the rudest manner possible. But though there are plants which would thrive if so treated, numberless others, and amongst these the most ornamental and beautiful of the race of hardy plants, will scarcely succeed, even though their removal be effected with the utmost care The manner in which the operation of transplanting these and similar plants is effected, whenever it may be desirable or necessary to remove them, becomes, therefore, a subject of interest and importance, most especially to the class of readers to whom these remarks are more particularly addressed; and it is proposed in the present paper, to review some of the leading principles which are necessary to be borne in mind in performing it successfully.

The operation of transplantation, being one purely artificial, we cannot refer to nature for an example as to the manner in which it should be performed; the principles of science, our knowledge of the growth of plants, and of the means by which their vital energies are kept in vigorous exercise, must, therefore, supply the information. It is scarcely necessary to state, that the roots of plants are the organs through whose agency they derive their nourishment from the soil,

2 E

the extreme points of the fibres acting as mouths, and imbibing the sustenance necessary to maintain their vitality. Plants being organized beings, with vital powers adapted to their peculiar nature, these powers require to be maintained in full exercise, if the plants are to attain that degree of perfection of which nature has rendered them capable; in order to ensure this, they must be supplied with as much food as they are capable of consuming: and it is no less necessary that their respiration should go on uninterruptedly, for unless this be attended to, they will be unable to digest and assimilate their From this it will be evident, that in conducting the operation of transplantation with successful results, the fibrous roots of the plants must be carefully preserved from injury during the process of removal, and that when placed in their new position, they must be duly supplied with food, that food being either naturally existing in the soil, or supplied by artificial means. The following important considerations are, therefore, involved :- the preparation of the soil, the removal of the plants from their original situation, their transportation and insertion in the new situation, and the season during which these operations are performed.

In making preparation for the plants, the nature of the original soil, and also that most agreeable to the kind of plants to be removed, are points which equally require consideration. If the original soil is tolerably fertile, but few trees or shrubs will refuse to grow freely, and those few chiefly amongst the class denominated American or peat earth shrubs; on the other hand, if the soil is naturally sterile, a considerable portion of rich loam should be employed: and even if the soil is naturally good, the addition of fresh loam will be advantageous in the case of valuable plants, or those which it may be desirable to cause to grow freely. Whether it is judged necessary to add fresh soil or not, it is indispensible to perfect success, that the soil should be properly stirred and loosened for some distance beyond the points to which the roots will at first extend; unless, indeed, the soil is naturally so light, as not to offer any obstacle to their free ex-In the case of American plants, or those which may happen to require any particular kind of compost, part of the original soil should be removed, and its place supplied by that which is most suitable to the kind of plants; it is not important to provide peat earth alone for American shrubs, a considerable portion mixed with the natural soil being sufficient, and even this is not indispensible, except with the more delicate kinds, unless they may have previously been growing entirely in peat earth: in that case, it is not advisable to place them at once into a different kind of soil. Rhododendrons, and other robust kinds, will thrive freely in a good open loamy soil, provided they have been planted in it when young.

The next consideration is, to open a pit for each, sufficiently large to admit of the roots being spread out without being cramped at their extremities, and just so deep as to allow of the plant standing somewhat more elevated than before: the soil in the bottom of the pit should be made even, and drawn from the sides so as to rather elevate the centre, instead of allowing the centre to remain the lowest part of the excavation, as is too frequently to be observed. The situation having been thus prepared, the next step is the removal of the plants. In performing this, it is generally desirable in the case of shrubs of considerable size, and especially evergreens, to open a circular trench around them, in diameter nearly equal to the extent of the branches, and then carefully to remove a portion of the soil from the roots, retaining as much as may be deemed desirable, as a protection to the fibrous rootlets near the stem; whilst, however, this care should be exercised in removing valuable trees, there are others which would succeed even though they received the rudest treatment, and would be found capable of bearing severe mutilations without apparent injury; but these being extreme instances of a tenacity of life, must not be regarded as effecting general principles. Were it possible to preserve every minute fibre in the removal of a tree, it would be desirable to do so, and success would be rendered certain; but as this is not practicable, the least possible amount of injury ought to be inflicted; always bearing in mind that it is not by the old coarse roots, that the absorption of food is carried on, but by the youngest parts, and especially the spongioles. Under ordinary circumstances, more or less injury must be sustained by the process of removal; and in this case, the large roots which may happen to become mutilated, should be cut with a clean smooth face, at rather an obtuse angle, in order to facilitate the emission of fibres, which it does by causing the vessels to contract, and thereby preventing the introduction of an excess of water, the wound healing by granulations formed by the living tissue, more or less speedily in proportion to its size; whereas, if allowed to remain in a bruised and ragged state, disease and decay are spread to the healthy parts. In transporting the plants, if the distance to which they are to be removed is considerable, it will be necessary to bind a mat or two firmly around the ball of earth, so as to prevent its being loosened, and the fibres broken off in the act of transport, and this binding should not be taken off until the plant is placed in its new situation. Previous, however, to setting the plant in the pit prepared for it, the extent of the ball of earth should be examined, so that the excavation may be rendered both deep and wide enough before the plant is set in: if this precaution is not taken, it will be found very inconvenient as well as injurious to the plants, to have to lift them more than is absolutely necessary.

proper position having been given to the plants, let the roots be laid out to their full extent, cutting off with a knife any of the bruised extremities, in the manner previously noticed, then fill in carefully about them with pulverised soil, taking care that none of them are bent, or forced into an unnatural position, tread lightly about them, and having nearly filled in the soil, give a good watering, and after allowing this to soak for a few hours, finish off by levelling the soil. If the situation is at all exposed, it will be necessary to support the plants by stakes, or any local means; even in all cases, it is better to adopt this precaution, for the injury done to newly planted trees by being rocked backwards and forwards by wind is incalculable, the points of the roots are drawn from their position, and frequently broken, and a funnel is formed close to the base of the stem, in which water is collected, and carried down just where it is least wanted.

Deciduous shrubs being planted at a season when they are devoid of foliage, and consequently in an inactive state, will generally succeed with a much less of amount of care than that above detailed. Many hardy evergreens also do not absolutely require so great a share of consideration in removing them; as, however, when a tree is planted, it is usual to expect that it is intended to grow, and it being natural to suppose that as great an amount of perfection as it is capable of attaining is desired, it is nothing more than reasonable to conduct its removal in a manner which a knowledge of the nature of vegetable development points out as most conducive to success; "whatever is worth doing is worth doing well."

Another paramountly important consideration is, the season in which these operations are effected; for though trees and shrubs may and have been removed successfully at every season of the year, under favourable circumstances, yet, it is only by an accumulation of these, and such are not always to be obtained, that success is ensured. The season which should be made choice of, appears to be very clearly pointed out, and that period is early in autumn. The success which may attend operations, prosecuted at any other period, entitle them to rank only as exceptions, and cannot claim for them to be regarded as standards of imitation. As soon as ever a plant has shed its leaves in autumn, it is as much at rest for the season as it will subsequently be, unless it is frozen; in short, its torpidity would be greater at that period, in consequence of its excitability being completely exhausted by a season of growth, without having had time to recover itself. If, at that time a root is wounded, a process of granulation or cicatrisation will commence just as in a cutting, and from that granulation, which is a mere development of the horizontal cellular system, rootlets will eventually proceed; it being obvious,

that in the process of removal the roots must be injured to a certain extent, it follows that the sooner in autumn the wound is inflicted the better, for it will then have a longer time to heal: and, therefore, the earlier in autumn that transplantation is effected, the less injury will be sustained by the plants, in consequence of their being in a condition to feel their mutilation and removal less than at any other time; and when the growing season returns, they will be more nearly in the position in which they would have been without removal at all, than if that had taken place at a more advanced period. of plants being necessarily more or less exposed in removal, for a greater or less length of time, it becomes an important matter in the choice of a fitting season, to provide one in which the least possible injury will result from their necessary exposure. At their extremities, or absorbing points, roots are extremely delicate, unprotected by a fully organised epidermis, destined to exist only in a moist medium, and readily destroyed by exposure to dryness, equally as by actual violence—autumn and mid-winter are, for this reason, the most suitable seasons, because of the dampness of the air, which at these periods is very generally in a state of saturation; andfif this season is suitable for deciduous trees, it is much more important to evergreens, although it is equally true that these latter may be successfully removed, even at Midsummer, provided that circumstances are favourable: but these circumstances are not at all times to be depended on, and can only be considered to refer to particular objects, and not to affect general principles. A deciduous plant in winter, when its most important respiratory organs are removed, still respires through its bark; an evergreen differs in this material circumstance, that it has no season of rest, its leaves remain alive and active during the winter, and, consequently, its circulation, perspiration, assimilation, and production of roots are incessant; less active it is true during winter. but very far removed from a quiescent state. This being the case, evergreens in their removal are liable to the same risks as deciduous trees when in full leaf, namely, exhaustion by the undiminished call for food; when, at the same time, the means of supplying it are, by the injury sustained in removal, more than usually limited. There is however, this difference to be borne in view, the leaves of an evergreen are covered with an epidermis, which by the arrival of winter, becomes firm and tough, and is capable of parting with aqueous vapour, much less rapidly than one of thinner texture, such as is usually found on deciduous trees. Hence, although the transplanting of an evergreen is not analogous to the removal of a deciduous plant in leaf, yet it must be apparent that the extent of perspiring surface in the former, however low its action, gives rise to much difficulty, superadded to whatever may exist in the latter case; and we are accordingly forced

to the conclusion, that whatever care is necessary in the selection of a season, damp, and not too cold for transplanting a deciduous tree, is still more essentially requisite in the cases of evergreens. therefore, somewhat extraordinary, that the planting of shrubs should so frequently be deferred till late in the spring, on the supposition that such is the best season for them, as if drying winds and bright sunshine beating on the roots, necessarily exposed for a time, and thereby exciting the action of the perspiratory organs to their full extent, were external conditions, which could be disregarded with impunity. As an excuse, it must be presumed for want of a better. in support of spring planting, it is frequently recommended, that planting on dry lands should be performed in autumn, and that on wet soils it should be deferred till spring; as far as regards this, it may be remarked that wet soils are not in a fit condition for planting at all, and cannot be so until a thorough system of drainage has altogether altered their character; this assertion must, of course, be qualified to a certain extent, some trees being found to thrive well in damp situations.

The success of removing evergreens during summer, a process which has been effected, depends on the damp, mild, and cloudy state of the weather at the time, and just after the plant is removed; such plants must, however, be removed with as much soil as possible, and also receive a thorough watering, which must be continued if dry weather ensue: it may be adopted in special and particular cases, but cannot be recommended for general practice. When, however, it is adopted, the soil around the plants should be mulched immediately the planting is finished, and this, with the necessary waterings, will generally prevent a too extended abstraction of moisture from the soil.

Plants of trees and shrubs which may have been grown in pots, may be planted cut at any season without any great risk, the only point necessary to be observed beyond what has been already advanced being, to take care to disentwine the roots from their compact condition, and spread them out, diverging in all directions from the stem.

REMARKS ON THE CULTIVATION OF THE BROMPTON STOCK.—(Mathiola Simplicicaulis.)

BY EVAN HIRST, GARDENER, CAUNTON MANOR, NEAR NEWARK.

I have not seen in your valuable publication, any remarks on that beautiful summer flower, the Brompton Stock. I have always been one of those who have ardently admired it, but, it has generally been my lot to be disappointed in seeing it brought to perfection. When well grown, there are few plants which present a gayer, or more fascinating appearance; besides which recommendation, it possesses another important one, namely, a most delicious aromatic fragrance, with which but few of its compeers can at all vie. It is alike beautiful, and in character, when grouped in the refined parterres of the wealthy, and also when scattered here and there in the humble border of a cottage garden; in the one place, it loses nothing by comparison with its gay neighbours; and in the other, it adorns with sterling beauty the rustic dwelling, mocking with its sweetness the honey-suckle on the porch, or the rose trained beneath the window on the wall of the humble dwelling.

The course which I formerly adopted in cultivating this favourite flower was, to sow the seed in April, and when the plants were sufficiently large, I used to plant them out in the flower beds; when I wanted them to flower, placing three or four in a patch, and allowing them to remain through the winter. This I found to be attended with disappointment, for, in the dull foggy days of winter, I frequently lost my plants, through, as I supposed, the low and damp situation of my garden. Vexed by these repeated disappointments, I was led to adopt a totally different plan, which has succeeded beyond my utmost expectations. It is as follows:-I sow my seed in the latter end of May, or beginning of June, and when the plants are up, and fit for potting, I put them into forty-eight sized pots, three or four in each, using very rich loamy soil, to which I add a considerable portion of decomposed manure: this I mix up well, but I find it better not to After the plants are potted, they must be well watered, and placed in a shady situation, and kept moist by regular and attentive waterings through the summer months: towards the autumn, I remove them to a hard walk, exposed to the south, and let them remain there until the frosts set in. I then have them plunged in coal ashes, beneath a wall having a south aspect, and let them remain in that situation till the latter end of February; I then take them to the flower beds where I intend to plant them, and having prepared the ground, by digging out some rather large holes, which I fill up with good compost, with which a considerable portion of decayed manure has been mixed, I plant them out carefully. They soon begin to grow vigorously, in consequence of finding an abundance of food, and make very strong plants, some of them attaining from three to four feet in height. The flowers are of a very large size, and produced in such abundance, that they have a very beautiful and splendid appearance, and as such my plants have been admired by every lover of flowers who has seen them. The extra trouble taken with the plants, by pursuing this treatment, and by preparing the soil in the manner I have recommended, is amply repaid by the splendid manner in which the plants bloom.

Trusting that these remarks may be useful to those, who, like myself, may have been unsuccessful in cultivating this desirable flower, I hand you the above outline of the successful course I have for the last few years adopted, which, if thought worthy, is at your service for insertion in your Magazine.

OBSERVATIONS ON THE TREATMENT OF NYCTE-RINIA LYCHNIDEA, OR ERINUS LYCHNIDEA.

BY MR. W. TAYLOR, GARDENER TO J. COSTAR, ESQ., STREATHAM.

The Nycterinia lychnidea, (or as it may be known to some, Erinus lychnidea) though not a strikingly beautiful plant, has, nevertheless, several interesting and peculiar properties to recommend it; firstly, its delicately white and star like blossoms, do not expand until the direct rays of the sun have disappeared; and, secondly, on account of the delicious and powerful fragrance which its blossoms give out during the night, and whilst they are expanded: in many respects, therefore, when grown to high perfection, it forms a desirable object for the drawing-room.

Having for some time been very successful in growing it as a specimen plant, and thinking it worthy of more general attention than is usually bestowed on it, I, therefore, send to you my method of treating it, trusting that the ease with which it may be cultivated, will induce many who have hitherto disregarded it, to bestow on it the attention it deserves. My mode of culture is as follows: - About the second week in April, I select as many cuttings as I deem necessary, choosing the tender points of the growing shoots, and as free from flower buds as possible; I prepare them like other soft wooded cuttings, and plant them in pots, the size of which is regulated by the number of young plants required. I fill the pots half full of potsherds, and then cover these with a little short moss; this I use in preference to turf, for in many cases in which turf has been employed as a covering to the crocks, I have found that after the cuttings get rooted into the turf, it is difficult to separate them without doing serious injury to the young fibrous roots of the plants. After placing the moss on the potsherds, I fill up the pots with a mixture of three parts sand and one part peat, sifted through a fine sieve, and well incorporated together; when the cuttings are put in, I give a gentle watering, with a fine rosed watering-pot, and after allowing them to drain a little, I place them in a frame where there is a gentle bottom heat, and about sixty-five degrees of atmospheric heat, admitting a portion of air in the mornings to prevent their fogging off. When rooted, I pot them singly into sixty sized pots, in a compost of equal parts of leaf mould, peat, and sand, and then return them to the frame for a few days, in order to re-establish

them; after which, I remove them to a cold frame, and admit air at all favourable opportunities. After they commence growing freely, I pinch out the tops of the shoots, which causes them to throw out lateral branches in abundance; and whenever these become crowded, I carefully stake them out. As soon as the roots reach the sides of the pots, so that the balls may be turned out entire, I re-pot them into small thirty-two sized pots, adding a little good turfy loam with the compost before recommended. After shifting, great caution must be used to guard against over watering, being at this stage of their growth exceedingly susceptible of injury by a too liberal supply of this element. As the season advances, and when the weather is dry, I expose them to the open air by removing the glass frames during the night; like most other delicate habited plants, a slight shower is of great benefit to them, but it is necessary to guard them carefully from heavy rains. Worms are great pests when they gain ingress to the pots, to prevent which, I either place them on temporary shelves, or invert a flower pot, and place them upon it. When the sun is very hot, I admit air both at the back and front of the frames, and also shade the plants for a few hours during the middle of the day; due attention must be paid to pinching out the tops of the young shoots, and also to staking them out carefully from time to time as they grow, re-potting them whenever the roots sufficiently abound, or come in contact with the inside of the pots, and adding at each shifting a larger portion of loam; for the last shifting, I use half loam, mixed with equal parts of peat, leaf mould, and sand. By the middle of October I remove them to the back shelf of a greenhouse, and place them near the glass, where they enjoy a free circulation of air, at all favourable opportunities.

If they are wanted to bloom in April, the shoots must not be stopped after January; but if it is required to have them in bloom at any later period, it will be necessary to continue stopping them accordingly. By assiduously following the line of treatment which I have detailed, I have obtained plants growing in No. 12 pots, eighteen inches in height, and five feet in circumference, regularly covered with bloom. Should you think the above worthy a place in your valuable Magazine, it is at your service.

[The generic name of this very interesting and deserving plant, was altered by the late Professor Don, being essentially distinguished from Erinus and Buchnera, by the structure of the anthers and stigma, and also by the insertion of the filaments. The present generic title is derived from Nycterinos, nocturnal; in allusion to the expansion of the flowers during the night.]—ED.

OBSERVATIONS ON THE MEANS OF SUPPLYING A SUCCESSION OF PLANTS FOR THE DECORATION OF THE FLOWER GARDEN IN SUMMER.

BY M.

At this season of the year, considerable preparation will be going on for the decoration of the summer garden, and much of the success attendant on the after exertions made, will depend on the preparatory steps taken thus early. Annuals of course will be raised in the usual manner, and if common care is taken they will be sure to sustain their parts; but with perennial bedding plants, such as are kept in a greenhouse during winter, the case is somewhat different. Necessarily drawn and etiolated to a certain extent by the application of heat, and the absence or scanty share of light during winter, they require gradual inuration and exposure; and cramped at the roots by being confined in small pots during three or four months, they require removal into larger pots, and to be supplied with a generous compost. The first of these objects is usually effected by removing the plants about this period to cold frames, and by a little attention to the admission or exclusion of the external air, as it may be cold and chilling, or mild and suitable to their tender constitutions, they will soon attain a sufficient degree of strength to bear more complete exposure, long before the time of their removal, to decorate the summer garden or the vase. To supply the wants of the latter case. is an object of immediate consideration, and in order to do this, a considerable extent of the temporary protecting frames are necessary. These may be of any rude construction, provided they exclude cutting winds, and admit of being covered with glass sashes; at a later period, this latter may be dispensed with, a covering of mats at night being sufficient protection, but for some time after their removal from the greenhouse, it will be desirable to exclude cold winds and rain, at the same time light is essentially necessary to be admitted. attain strength, and the season advances, these considerations will be less important, night being the only period during which protection will be absolutely required. When placed in these frames, they must not be crowded, for it is important that they should make some advance in growth, and this they will not do satisfactorily if they are compressed within too narrow limits. But, not only do those plants require consideration which were potted separately into small pots in the autumn; those also which were left in the cutting pots during winter require simultaneous attention, in order to keep up a succession of decorative plants: these should now be potted singly, and otherwise

submitted to the same routine treatment as the others. Whilst this is going on, a few large plants of the different kinds should have been removed to a slightly elevated temperature, the cool end of a stove being a suitable place, in order to induce them to produce a supply of young shoots for cuttings; a mild hotbed being in readiness, the cuttings should be taken off, when of sufficient size, and planted in the ordinary way, and rooted as speedily as possible in the hotbed: they should then be potted off, and will come into flower at a period still later than either of the former patches of plants. potting them, they should be planted singly into small pots, and kept in a close frame for a short time, afterwards, they may be gradually exposed; and, if not soon after wanted for planting out, they should be shifted, and preserved in readiness for supplying any deficiency arising from the failure of any of the plants, or other causes. repeating this course of propagation once or twice, a succession and abundant supply of plants will be obtained through the summer.

The extensive race of half-hardy annuals, are very desirable for the same purposes; these should now be sown on a mild hotbed, and potted off either singly, or two and three in a pot, according to their habits, and then nursed for a short time in a frame, and gradually hardened to bear full exposure. Two or three sowings should subsequently be made, to maintain a succession of plants. Many of these half-hardy annuals would flower in greater perfection, if sown somewhat later, in the soil and situations where they are wished to flower; but this is not generally practicable in the style of gardening, to which these remarks apply.

Some of the hardy annuals being extremely handsome, must not be overlooked in the arrangements made for securing a pleasing variety; these may be sown in a bed of prepared soil, some time during the month of March, and transplanted carefully with a trowel, when of sufficient size, or as early afterwards as may be required.

Whatever other arrangements are made to secure an abundant supply of plants, the object which it is desirable to attain is not reached, unless a very particular regard is paid in planting out, so to arrange the colours of the various patches, that each may harmonize with its neighbour, and so far to bear in mind the heights attained by the different species, that a giant may not be ranked next to a dwarf, than which, nothing has a worse or more tasteless appearance.

ON THE CULTIVATION OF THE NEAPOLITAN VIOLET—(Viola odorata pallida plena).

BY J. H. S.

If we were to pause for a moment, to enquire what are the recommendations necessary to constitute a popular flower, we should discover that a due proportion of floral beauty, either added to, or apart from an exquisite fragrance, constitute the essential requisites in order to command a share of general admiration; simplicity of culture does not appear to be at all a necessary adjunct, for some of our most favourite flowers, require a most minutely particular and assiduous course of treatment, in order to attain that state of perfection for which their inflorescence is so especially prized. When, however, a beautiful and fragrant flower adds to its other charms that of a perfectly docile disposition, we cannot hesitate to consider it as an important advantage.

Possessed of no mean share of simple, but elegant beauty, and breathing out a fragrance scarcely equalled, and certainly not excelled, it is a matter of surprise that the Neapolitan violet does not rank higher in popular estimation, more especially since the treatment it requires offers no obstacle to its cultivation by any class of persons; it is true, indeed, that all admire the violet, there is none who do not inhale with evident satisfaction its delicious fragrance, in short, it is esteemed and prized by all classes throughout every stage of life, from the youth to the octagenarian, and yet by how comparatively few is it cultivated? How seldom do we see it growing in all that perfection of which it is capable, and dispensing those balmy odours of which it is pre-eminently possessed.

That its cultivation is not attended with extraordinary difficulty, will be evident from the routine of treatment to be recommended, and which will be found abundantly sufficient to ensure success:—As early in the spring as runners are to be obtained, take them off, and plant them a few inches apart, in light sandy soil, covering them with a hand-glass, and shading from the sun if necessary; they will generally be in a fit state by about the latter end of April, and in two or three weeks after they are taken off, they will be well-rooted, and ready for transplantation. Prepare for them a bed of light rich soil, on a warm border having a south-west exposure; then take up the plants carefully, preserving their roots as free from injury as possible, and plant them at about nine inches apart in the prepared soil, frequently loosening the surface with the hoe, keeping them free from weeds, and assiduously administering water in dry weather. About the beginning of August make up a bed of faggot wood, about three

feet in height at the back, and two and a half feet in front, facing the south, and large enough for a one or two light frame, according to the quantity which it may be thought desirable to cultivate; on this wood spread a layer of about six inches of newly rotted dung, and on this place one foot thick of a compost prepared by mixing in the proportion of one barrow load of sandy loam, two barrow loads of leaf mould, half a barrow load of well rotted dung, and half a barrow load of sharp sand, these should be well incorporated, and mixed some time previously. Contrive so that when this compost is placed in the frame, the surface of the soil may be about fifteen inches from the glass; after a few days, the plants may be taken up carefully, the runners trimmed off, and then planted at nine inches asunder each way in the frame. When planted, give a moderate watering, which may be repeated once or twice when the plants seem to require it. During the two or three succeeding months, namely, throughout August, September, and October, they should receive all the air possible, by allowing the lights to remain off night and day, except in wet weather; an occasional light shower during the earlier part of the autumn, will not be found to injure them; but it is highly important to prevent the soil from imbibing too much moisture, this being their greatest enemy through the winter. When the nights begin to get cold, the lights should be placed over them, taking care to remove them through the day in fine mild weather. In the dull heavy weather which generally prevails in November and December, it is not advisable to take off the lights; air should, however, be admitted by tilting up the light a few inches, either at the back or front of the frame, according as the current of wind may proceed from the north or south, ordering it so that it does not blow directly on the plants. When they begin to flower, which is usually from December throughout the winter and spring, air should be less abundantly admitted, which will induce the buds to expand more freely: a portion should, however, be admitted, in order to improve the odour of the blossoms. As soon as frost commences, the bed and frames must be well cased round with coarse long litter, and the glass matted at night, and this must be continued through the winter, proportionably increasing the coverings so as to effectually preclude frost: in severe and continued frost, it is almost impossible to avoid leaving the mats and covering on the glass during the day; this should, however be avoided as much as circumstances permit, removing them so as to admit a portion of light, if it be only for an hour or two; at all other times the covering should be removed throughout the day. Water, at this season, if not totally denied them, should only be administered in very small quantities, and not at all, unless it is absolutely required.

To ensure a good succession of flowers, a second bed might be made up, six or eight weeks after the first, pursuing the same course; other plants may be kept under hand-glasses, and will bloom after those in the frames. Some persons prefer taking up the old roots, and dividing them, afterwards planting them in a bed prepared similarly to the above: generally these are not so good as young plants.

Another course of treatment, and one which, in some cases, may be preferable, is to pot the young plants carefully into wide thirty-two sized pots, instead of planting them in the frame. The pots are then plunged either in coal ashes, or spent tan, in a similar frame, and their treatment subsequently does not differ from that above detailed; this plan admits of the removal of a few plants to a slightly elevated temperature, if they are required for any particular purpose, more readily than it could otherwise be done. The plants, when nicely in flower, might also be removed to the sitting room, which in many cases might be preferred to picking the blossoms and preserving them, by placing their stalks in water: which ever of these modes is followed, the requisites appear to be, healthy vigorous plants, light rich soil, a situation in winter free from damps and frost, all the light the season will afford, and as little water artificially applied as can possibly be made sufficient.

A somewhat more simple course, though necessarily one in which the results are not so satisfactory is, to provide strong and healthy young plants, in the manner already recommended, and in September take them up, and carefully pot them, preserving them from frost in any cold frame, and removing them in succession to the window of a living room; so treated, they bloom so as to amply repay the trouble bestowed on them, it is, however, very necessary to be cautious in the application of water.

The single Russian violet, which commences flowering in autumn, may be had in good perfection previously to the time the Neapolitan variety commences flowering, by removing a few patches, either to a sheltered corner, or placing them in a frame, and partially protecting them by the glass sashes in inclement weather; this variety, though much less handsome than the Neapolitan, is equally fragrant, and, therefore, forms a very desirable substitute for that kind.

Of the two varieties of Neapolitan violet, that with double flowers is most extensively cultivated on account of the superior beauty of its blossoms.

Snails and slugs often do considerable injury to the flower buds, unless carefully sought after and destroyed; the usual precautionary steps should, therefore, be taken to prevent their depredations.

ON THE TREATMENT OF THE DOUBLE CRIMSON AND WHITE PRIMROSES.

BY C. H.

Among the many old yet beautiful hardy flowering plants which appear to be almost neglected, except by here and there a devoted cultivator, the double varieties of Primula acaulis hold a very high position; the double white, and the double crimson varieties, are now more particularly referred to, and these being considerably more delicate than any of the other varieties, the following brief remarks on their treatment may be useful to some of the readers of your Magazine.

These varieties are usually cultivated in pots, not only because this admits of affording them more readily the necessary protection in winter, but also, because the delicacy and beauty of their flowers renders it desirable, that they may be placed in a position where these qualities may be duly appreciated and admired. The most particular points in their culture are, first, the soil in which they are planted; and secondly, the situation afforded them during the summer: the soil in which they appear to thrive most permanently, should be composed of equal parts of sandy turfy loam, and well reduced leaf mould, to which a portion of sharp sand may advantageously be added. This should be prepared sometime before it is required, and frequently turned over and well blended together: the situation which they absolutely require in summer, is a cool border, where they may receive the morning sun before it becomes powerful, but be protected from it during the hottest part of the day: in such a situation they should be planted out in spring, as soon as they have done flowering, in the prepared soil already recommended. Water during dry weather should be copiously administered in the evening, or after the heat of the sun is somewhat declined, continuing it as circumstances may appear desirable, until the summer growth of the plants is evidently matured. About the latter end of September they should be carefully taken up, and potted into wide shallow pots, of sufficient size not to cramp the roots, using the compost already recommended: the only further care they require is, to place them in a cold frame, where they will be just protected from frost, keeping them comparatively dry, and carefully watching that snails and slugs do not eat off the flower buds as they advance. It is scarcely necessary to say, that light should, as much as possible, be admitted, never keeping the frame covered in the day, except during very severe frosts, and taking care to allow a free circulation of air in mild weather; when in bloom, they may be removed to the greenhouse, or sitting room windows, and when they have done flowering, returned again to the frame for a short time, and then planted out as before.

REFERENCE TO PLATE LXXI.

PHLOX BROUGHTONII.

NAT. ORD. POLEMONIACEÆ. CLASS PENTANDRIA MONOGYNIA.

In a recent number we gave a figure of a very distinct and delicate variety of this popular flower; that now represented, we regard as one of the very best which have been originated. Its habit, is bold, giving it a decided character, its flowers are of a beautiful rosy-tint, and approach nearer to a perfect form than most others: besides which they are produced in such immense heads or clusters, that their appearance is very attractive. In a letter kindly communicated to us by Mr. Taylor, of Streatham, where the figure was taken, he states, "that the plant attains the height of five feet, with cordate lanceolate leaves, the flowers being produced in a close pyramidal panicle, two feet in length, during the months of August and September. It is a native of North America, and was originated from seeds by Messrs. Young, of Epsom, in 1837; and though it is a most splendid variety, deserving of universal cultivation, it is but comparatively little known." Having seen the plant in flower, we can bear witness to the profuse manner in which its flowers are produced, and also to the fidelity with which our artist has represented it.

As a genus of hardy ornamental flowering plants, the Phlox possesses many recommendations, and is deserving of a more extended range of cultivation; and though many very desirable varieties have lately been added to it, it can scarcely be doubted, that a diligent course of hybridization, would give rise to a race possessing still higher and more perfect characters. Our firm conviction in the force of these remarks, and the beauty of our present subject, must be our apology for having again obtruded the genus to the notice of our readers.

NOTICES OF NEW PLANTS.

CEREUS CÆRULESCENS, Blue Stemmed Cereus.

[Bot. Mag.

NAT. ORD. CACTACEÆ. CLASS ICOSANDRIA MONOGYNIA:

A very noble species of Cereus, which produced its flowers in the Royal Botanic Gardens at Kew, in the summer of 1841. In point of magnitude and delicacy, they are even superior to those of the well-known C. grandiflorus. The plant at Kew is unbranched, and about four feet in height, and nearly three inches in diameter at the thickest part; the stem is of a singularly glaucous colour, from which peculiarity it derives its name, and is composed of about eight deep furrows, and alternate prominent ridges. The flower is white, of very large size.

MYANTHUS DELTOIDES, Triangular-lipped Flywort.

Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A very pretty species, from British Guiana, first cultivated by R. Harrison, Esq., of Liverpool. The sepals are narrow and spreading, green, spotted with purple, the petals paler, of a yellowish green, and more distinctly spotted, the lip is triangular, of the same colour as the petals, marked at the base with dark transverse streaks.



 MIMULUS ROSEUS, VAR. MACLAINIANUS, Rose-coloured Monkey Flower.

Mr. McLuin's variety.

[Bot. Mag.

NAT. ORD. SCROPHULARIACEÆ. CLASS DIDYNAMIA ANGIOSPERMIA.

This hybrid variety of Mimulus, is the same as that figured in a recent number of the Floricultural Magazine.

DIGITALIS LUTEA VAR. FUCATA, Yellow Foxglove, purplish variety [Bot. Mag

NAT. ORD. SCROPHULARIACE E. CLASS DIDYNAMIA ANGIOSPERMIA.

A very ornamental herbaceous plant, attaining four feet in height, and bearing, during summer, a succession of yellowish flowers, tinged with blush, or light rosy purple, on the upper part of the tube; they are produced on very large racemes, and have a very ornamental character.

ONCIDIUM PUBES, VAR. FLAVESCENS, Downy Oncidium; yellow-flowered variety. | Bot. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

A very pretty variety of O. pubes, with lively yellow flowers, blotched with orange red. It was first detected in Brazil by Mr. Douglas, and has been subsequently met with by Mr. Gardner, in the Organ Mountains.

ARCTOSTAPHYLOS PUNGENS, Sharp-pointed Bearberry. [Bot. Mag. NAT. ORD, ERICACEÆ. CLASS DECANDRIA MONOGYNIA.

This South American shrub was raised in the Glasgow Botanic Gardens, from seeds sent from Mexico by Mr. Blair. It has been found by various travellers; by Humboldt, in elevated places about Moran and Villalpando; by Andrieux, in Oaxaca; and by Hartweg, at Zacatecas. "Hitherto it has been treated as a greenhouse plant; but probably this, as well as the more northern A. tomentosa, will be found to bear our winters with impunity in the open air." It is a much branched plant, with entire elliptical leaves, and terminal drooping short racemes, of from eight to ten flowers, white, tinged with greenish rose-colour.

CLERODENDRON SPLENDENS, Scarlet Glory Tree. [Bot. Reg.

NAT. ORD. VERBENACE E. CLASS DIDYNAMIA ANGIOSPERMIA.

A most beautiful climbing stove plant, a native of Sierra Leone; the foliage is oblong, and undulated, subcordate at the base, and of a deep green colour; the flowers, produced in terminal corymbs, are not inferior in colour to Euphorbia splendens. The general character of the climate from which it has been introduced, renders it probable that a considerable bottom heat, a hot moist atmosphere while growing, and at least a rest of four months in a drier atmosphere, after its growth is completed, will form the leading features in its cultivation in the stoves of this country. It was sent to Mr. Knight by Mr. Whitfield, whose account of its discovery runs thus :- " Late in the month of December, 1838, my servant, John Richards, brought to me a banch of the flowers of Clerodendron splendens, and afterwards took me to the spot where he found it growing wild. when I took up the root of it, after much labour, as the plant was growing in a very stiff gravelly soil. Upon further search, I found several others growing in stift loam, that appeared to me to be in its virgin state. At a subsequent period, I proceeded to the same neighbourhood to obtain more plants, but I was not successful. Early in February, 1839, I rambled, when practicable, along the south-west district of Sierra Leone, where I found it growing in great plenty, and of various colours, namely, crimson, brick-dust red, orange, and bicolor, (crimson

234 REVIEW.

and white;) the latter plant seemed to me to be more luxuriant, where the soil had been broken by the liberated Africans, for the purpose of cultivating the Manioc. The other varieties became scarce, where the soil had been disturbed; but in every instance, except the first plant, I found it growing in what I considered a strong loam, impregnated (from its colour, and aptitude to stain linen,) with a large portion of carbonate of iron. The plant Mr. Knight has flowered, being searlet, makes five distinct colours; it was brought by me from Sierra Leone, in May, 1840, but I had previously sent to the Duke of Bedford all the varieties I have named, and I had hoped that they would have flowered long before Mr. Knight's, as they had had twelve months' advantage, having been sent to His Grace in March, 1839, and again in July of the same year. When the root is shaded from the sun by the underwood, this C. splendens attains the height of ten or twelve feet; but if it is exposed to the sun, it seldom grows more than three feet."

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

LÆLIA PEDUNCULARIS.

A Mexican species of great beauty, with rich violet whole-coloured flowers, of the habit of L. rubescens. Cultivated by G. Barker, Esq., of Birmingham.

DENDROBIUM JUNCEUM.

Imported from Sincapore by Messrs. Loddiges. The stems are fusiform, erect, and branched above the swelling, many of the ramifications being terminated by a pair of flowers; the leaves are terete, and the flowers rather large, green, weined with faint purple lines on the side lobes of the labellum.

STELIS CRASSIFOLIA.

A singular little plant of no beauty, imported from the West Indies by Sir C. Lemon, Baronet, and flowered at Carclew, in December, 1841. At first sight it resembles S. ophio-glossoides, but is readily distinguished by its half-terete fleshy leaves.

ONCIDIUM BICALLOSUM.

This species, at first supposed to be a variety of O. Cavendishianum, was found by Mr. Skinner, in Guatemala, and lately flowered by Mr. Bateman, The flowers are two inches in diameter, appearing in a dwarf erect raceme (not panicle), of a rich yellow, the sepals and petals bordered with cinnamon colour; the flowers, moreover, are slightly scented, which is not the case with O. Cavendishianum.

REVIEW.

Blight on Flowers, or Figures and Descriptions of the Insects infesting the Flower Garden, &c. &c. London: T. M. CRA-DOCK, Paternoster-row.

It has long been a cause of deep regret amongst practical men, that of all the excellent works that have been published on Horticulture and Floriculture during the last twenty years, none have appeared treating on the immediate causes of blight incident to the Fruit, Vegetable, and Flower Garden. This is the more surprising, because every person who possesses the slightest knowledge of gardening, cannot but be aware of the constant liability to failure in cultivation, which attends the very best endeavours of the most diligent men: some of these failures, arising from the exceeding variableness of our climate, and various circumstances over which we have controul; but others from causes which, if properly understood, might for the most part be prevented.

It is upon this subject the authors of the "Gardener's Library" have entered; and we are happy to see, that in the volume before us, which forms the second of the series, considerable information is

given on this comparatively obscure subject.

The authors intend this work to consist of a series of cheap and small volumes necessary for a cultivator to be in possession of; each volume to be illustrated with coloured plates, and to be completed in itself; so that any person interested in only one branch of horticulture, will have a complete work in the volume treating on that subject alone.

The volume before us, on the "Blight on Flowers," contains about 250 pages of letter-press, and is illustrated with 18 coloured plates; these plates contain upwards of 60 coloured figures of insects, found in our flower gardens, some of which are extensively injurious; also, 18 coloured figures of plants, chiefly designed to explain the natural habits of the insects, and several designs for the erection of horticultural buildings, as conservatories or plant stoves.

The letter-press not only points out the causes of failure in the culture of flowering plants, and means to be used as preventives and cures, but also enters largely into the propagation and general culture of most genera, and the peculiarities of others. Besides this, calculations are given of the probable expence of erecting horticultural buildings, the formation of flower gardens, fountains, planting shrubberies, and most other particulars necessary to be known by all lovers of gardening.

The colouring of the plates is not exactly to our mind, but the insects are generally faithful representations. We cannot but highly approve of the design of the authors, and trust they will be able to carry it out. We recommend the present volume to the notice of our readers, as one likely to be of considerable advantage, especially to young gardeners, who will find in it much that is interesting for them to be acquainted with.

MISCELLANIES.

HORTICULTURAL SOCIETY'S ROOMS, REGENT-STREET, LONDON, JANUARY 18TH .- The plauts exhibited at the meeting were comparatively few; the following are those most worthy of note: Epacris carnumbrata (?) from W. H. Storey, Esq., it is a very pretty, compact growing, and delicate flowered variety; a cut specimen of Dendrobium speciosum, in great beauty, from Mr Fielder, gardener to W. Linwood, Esq., these blooms had doubtless been obtained, by keeping the plant during summer in a cool greenhouse, and afterwards placing it in a warmer situation; Oncidium bicallosum from J. Bateman, Esq., a fine species, related to O. Cavendishianum; and a new Habranthus from South America, of a brilliant vermillion colour, and of large size, from C. B. Warner, Esq. The plauts from the Society's Garden were, Oncidium ornithorynchum, with its pretty pink, though small flowers, which are produced readily in a low temperature; O. leucochilum, with green and brown sepals and petals, and delicate white lip; O-Cavendishianum, with large yellow flowers; and Lælia anceps. Mr. Todd, gardener, Newnham Paddox, Lutterworth, sent'some Charlesworth Tokay grapes in good preservation; this variety, nearly resembling the Muscat of Alexandria, is thought by Mr. Todd to be superior as a late variety. Mr. Bissett, gardener, Burwood-house, Cobham, had two very fine pineapples, a "Providence," weighing five pounds two ounces, and an "Enville," weighing four pounds seven ounces; from Mr. Hatch, gardener, Leigh-court, Bristol, were three others, well grown, though somewhat less in size; from Mr. Ross, Penrhyn Castle was a melon, called "Barker's Forcing," said to be excellent for early and late crops-it is apparently a slight variety of early Canteloup. Mr. Beck, of Isleworth, exhibited some slate tubs for oranges and other trees, and also some on a smaller scale, which he recommends for Pelargonium and similar plants; the immense weight of these tubs would render them very inconvenient if used in cases where large plants have to be moved from one situation to another. A paper was read from Mr. G. Shiells, gardener to Lord Blantyre, detailing the treatment by which ripe black Hamburgh grapes were produced on the open walls, as exhibited in October last.

FEBRUARY 1st.—Among the plants exhibited was a splendid specimen of Denbrobium cærulescens, with from 250 to 300 blooms; the flowers of this noble species are light coloured, with a dark centre, and very beautiful; it was from Messrs. Rollisson, who had also a new Vanda, with dingy brown flowers, and a good plant of Stanhopea oculata, which has yellow blossoms, spotted with chocolate colour, and powerfully fragrant. The plants sent from the Society's Garden were Cymbidium sinense, with dingy yellowish flowers, which remain in perfection and emit a delicious odour for a considerable length of time, even when moved to a drawing room; Oncidium Cavendishianum, in good bloom; Oncidium pergameneum, with yellow and brown flowers, and curious leaves feeling like parchment; and Zygopetalum rostratum; a prostrate variety of Erica Mediteranea, found in Ireland, and Acacia longifolia, with its pretty yellow flowers. A description of the method practised at Cocolan, in Chili, for the extraction of syrup from the Jubea spectabilis, was read from Mr. Lucas " The palm, it was stated, grew in great abundance on the estate, particularly in moist sandy soil, through which runs a rivulet. It is in the dry season that the syrup is made; and in order to do this, the tree is cut near the root with a hatchet, and a rope being attached to the branches, it is gradually pulled to the ground. The leaves are then stripped off, and a piece of the stem is cut out, when the juice begins to run from the wound; when it ceases, another incision is made, higher up, and so on till cuts have been made nearly to the top of the tree. It is said, that in the top there is a pith, which, when cooked, is excellent, and much esteemed by the natives. Jubea spectabilis blooms in October, and that is the proper season to collect the juice, which, as soon as it is obtained, is put into copper vessels, and subjected to a considerable heat, till it attains the necessary consistence. In flavour and appearance, the syrup is like molasses, and it may be refined, and by distillation, good rum, it is expected, will be produced.

RILEY'S NEW BURDOCH SPINACH.—This is said to be a very superior sort. It originated with, and has been grown only, by Mr. Riley, gardener to P. Butler, Esq., near Philadelphia; when properly cultivated it resembles in appearance the savoy, with the exception of size, which is several times larger and the quality superior: the leaf is smooth, and the whole plant quite hardy, standing out the severest winters without injury. The seed should be sown in drills, on rich well manured ground, and the plants thinned out to one foot apart; each plant is full the size of a half bushel when properly cultivated. It will be noticed that this new variety possesses one excellent quality, namely, its hardiness, which enables the plant to stand our severe and trying winters without injury. It has been shown at the Pennsylvania Horticultural Society.

—Harvey's Magazine of Horticulture, a highly respectable American periodical.

Supposing that space enough could be afforded, the fruit room would be improved by being divided into two or three compartments, to separate the ripening fruit from that which will be later. In such a case, the door should be at the end of the fruit room, and the fruit which ripens first should be next the door, while that which is latest should be stored up in the farthest compartment. The reason for such an arrangement is, that the compartment next the door may be ventilated without opening the other divisions; and as ripening fruit requires more ventilation than such as is still immature, this is an important provision.—

Gardener's Chronicle.

There are cases in which imposing streams may be made to appear in a garden or pleasure ground, with but a small supply of water, and this is done by deception. Such artificial productions can only deceive the eye to a certain extent; such as the point where the stream seems to be checked by an impenetrable thicket, and appears beyond as a small brook, which had produced the supply. When the eye can no longer follow the course of a stream, on account of the steep rocky acclivities overgrown with thorns, the imagination has the fullest liberty to indulge in its own creations.—Schell.

A painter's landscape depends upon his management of light and shade; if these be too smoothly blended with each other, the picture wants force; if too violently contrasted, it is called hard. The light and shade of natural landscape require no less to be studied than that of painting. The shade of a landscape gardener is wood, and his lights proceed either from a lawn, from water, or from buildings. If on the lawn, too many single trees are scattered, the effect becomes frittered, broken, and diffused; on the contrary, if the general surface of the lawn be too naked, and the outline of the woods form an uniform heavy boundary, between the lawn and the horizon; the eye of taste will discover an unpleasing harshness in the composition, which no degree of beauty, either in the shape of the ground, or in the outline of the woods, can entirely counterast

In this state the natural landscape, like an unfinished picture, will appear to want the last touches of the master; this would be remedied on the canvass in proportion as the picture became more highly finished; but, on the ground, it can only be effected by taking away many trees in the front of the wood, leaving some few individually, and more distinctly separated from the rest: this will give the finishing touches to the outline.—Repton.

Goldfussia glomerata, is a most desirable stove plant, when well grown; in attains a considerable size, and produces flowers quite up to the winter months. In cultivation it does not appear to present any serious difficulties to the cultivator, requiring only a free and generous treatment at an early part of the season.

QUERY.—Would the Editor be pleased to answer the "homely" question of "A Constant Reader," as to whether it be a good plan to "tread onions" when they are just peeping from the ground for a general crop; as also whether the sprinkling of a little pounded saltpetre will not prevent the crop from being destroyed by the grub, and whether the saltpetre would have an injurious tendency in other respects.

[In answer to "A Constant Reader," it is not usual to tread onions after they have commenced vegetating; the seed is usually trodden into the soil at the time of sowing, and the ground afterwards adjusted; the object of treading is so far to consolidate the ground, that while the fibres can pierce downwards, the bulb may be principally formed on the surface; if they are not far advanced, it will not, however, burt them. Saltpetre would kill the grub, if it came in contact with it, but the same would also happen to the plants; the caustic properties of the saltpetre being destructive of vegetation when applied directly, although acting as stimulants when applied Soot, sprinkled moderately over the ground, would be most otherwise. likely to destroy or prevent injury by the grub; it would also act as a manure, and preventive against snails, slugs, &c. The dust of quick lime would answer the latter purpose also. Saltpetre, if applied when the ground is not cropped, viz. in autumn, would have the desired effect, but it must not be planted on directly .- ED.]

MONTHLY CALENDAR.

FLOWER GARDEN.—More than ordinary diligence will be required at the present season, in making preparations for the summer. The digging and dressing of flower-borders; the division and transplantation of herbaceous plants; if not done, as directed last month, and the planting out of biennials sown in summer, must receive immediate attention. Roses should be pruned and tied up neatly without further delay; in doing this, the Chinese, noisette, and similar kinds, should not be too much thinned, removing only here and there an entire branch when these become crowded, and shortening the shoots, but little, if at all; this should especially be borne in mind in pruning those worked as standards. Garden roses, such as Provence, and those of similar habits, grown as dwarfs, should be cut back to about two or three eyes, thinning the shoots if too thick, and keeping the centre quite hollow, so as to represent the form of a cup; the same remarks apply to standards of the same class. Beds on which bulbs are planted, should be dressed over, as soon as they make their appearance; if done before they are

liable to sustain injury. Anemonies and Ranunculuses may be planted, if delayed so long. Tulip beds must be carefully attended to. Alpine plants, in pots, should be re-potted, and legibly named. Auriculas should have a top dressing of rich soil, and if more than one truss of bloom is thrown up, the weakest should be removed. Carnation layers should be potted into large pots; chrysanthemums should be propagated by cuttings about the end of the month; hardy and half hardy annuals should be sown, the latter in the manner elsewhere directed. Lawns may be prepared, and sown with a selection of proper grasses; edgings of all kinds should be rendered perfect; gravel walks should be turned, and re gravelled if necessary, and frequently swept and rolled; weeds, and litter of every kind should be removed; lawns should be swept and well rolled previous to mowing them; means should now be adopted for the destruction of all kinds of insects and vermin.

PLANT STOVE .- As the days lengthen, the heat may be somewhat increased, maintaining it at about 70 degrees by day and 60 degrees at night; admit air early in the morning, if the heat is satisfactory, and the weather mild, but always close early in the afternoon, as by this means much less fire heat is required during the night. Syringe the plants in the morning on all fine days, and keep the atmosphere some degrees moister than before, gradually increasing the amount; watch narrowly for insects, for plants can never look well if infested with them. Re-pot the plants; quick and vigorous growers can scarcely be overpotted, if there is room for them, and the pots are well drained; delicate kinds, on the other hand, should be kept in small pots as they are not then so liable to suffer from imbibing too much moisture. In watering newly potted plants, great care must be used, in order that the soil may not become saturated; in which case the plants will not thrive: this is of less importance when the roots become active, but at all times discrimination should be used. Epiphytal Orchidaceous plants, which have been resting through the winter, should now be induced to grow rapidly, so as to perfect their pseudo-bulbs early; they should be shifted as soon as signs of growth are evinced, using turfy peat and moss, cut short, and mixing some potsherds amongst the soil. The pots must be well drained, and the plants kept in an elevated position; those growing on blocks of wood or in baskets, should also be attended to, renewing the moss about their roots, if it is found necessary; terrestrial species should be re-potted, using a mixture of turfy loam and peat, with the admixture of a little coarse sand; water must be supplied cautiously at first, but after they commence growing freely, it should be more liberally administered. The atmosphere should be kept moist during the early part of the day, and the temperature maintained from 70 degrees to 75 degrees; a heat of 65 degrees will be sufficient at night, (see also p. 216)

GREENHOUSE.—New Holland plants, which will now be about beginning to grow, must be carefully potted, using clean pots, well drained. A compost varying from peat earth to a mixture of peat and loam, with the addition of sand, will be required, administering it according to the proportions agreeable to each genus; a little broken freestone, mixed with the soil will be found advantageous. Gersniums, Calceolarias, Cinerarias, Fuchsias, and other free growing soft-wooded plants will require frequent shiftings, and allowed abundance of room; the green fly, and other insects, must be carefully watched and destroyed, so as not to become numerous, or no art will cause the plants to grow kindly: many of these plants may be removed to pits and frames. Cacti should also be re potted, using a mixture of sandy loam, and well-reduced manure, and adding a portion of broken freestone; complete drainage must be provided, and the plants may remain in the greenhouse until next month, when they should be submitted to a

brisk dung heat. Air must be admitted as much as possible, and fire heat may be dispensed with; shutting up early should however, be adopted. The same remarks, on watering newly potted plants, as are given above, apply also here.

PITS AND FRAMES.—Into these many plants should be removed from the greenhouse. Half-hardy annuals should be sown, and potted or transplanted when of sufficient size. Balsams, and other tender annuals, should be sown, and kept in the hotbed frames, re-potting them frequently. Bedding plants must be prepared for transplanting; and the introduction of plants to the forcing frame must be duly attended to.

KITCHEN GARDEN.—Sow successional crops of peas, beans, spinach, and turnips; a full crop of onions, carrots, parsnips, beet, and other esculents; lettuce, small salading, and radishes frequently; broccoli, cauliflower, savey, borecolo, Brussels sprouts, leek, and red cabbage, a main crop, for autumn and winter; parsley, as edgings or in beds; celery, for main and late crops; and tender annual herbs, as basil, thyme, savory, marjoram, capsicums, tomatoes, &c. in heat, to be hardened off when large enough. Plant Jerusalem artichokes, sea kale, asparagus, potatoes for early crops, shallots, garlic, onions sown in antumn, for large bulbs; cabbago, full crops for summer use; cauliflowers, in sheltered situations; lettuce, autumn sown red cabbage, &c. Prick out celery on a very slight hotbed, and prepare for others; cauliflower, for transplantation for summer use. Transplant and make up beds of herbs; destroy weeds, and hoe frequently between advancing crops; earth up the early-sown peas and beans, and attend to neatness.

FRUIT GARDEN.—Let all pruning, nailing, and tying of fruit trees be speedily finished; protect the roots by mulching, where necessary, and the blossoms of wall-trees as they advance, by means of netting: grafting may be performed, commencing with those kinds which are in the most forward state.

FORCING GARDEN.-Pines intended for fruiting in autumn, should now be shifted; those re-potted in autumn will be benefitted by removing a few of the lower leaves, and the addition of some fresh rich soil, which may be kept up by placing a strip of turf against the rims of the pots, Succession plants should be shifted in suitable weather; in clear sunny weather after performing this, they should be slightly shaded. If the tan bed needs renewal, it had better be done, but avoid making it too strong: from 90 degrees to 100 degrees bottom heat is sufficient. Admit air more freely, but cautiously, and keep the atmosphere moist; shutting up early, to avoid too much fire heat: let the general treatment be liberal. Vineries require much attention in tying and thinning the shoots, impregnating the blossoms, &c.; increase the heat slowly as the plants grow, and syringe freely, except when in bloom; keep the air moist by repeated steamings, but not during sunshine; admit air as above directed: similar care is required in peach and other forcing houses. Cucumbers require a steady heat of about 70 degrees, and frequently to be topped; air must be admitted on the principle already laid down; sprinkle round the frame in the morning of sunny days, and shut close for an hour afterwards. Melons require rather more heat, and a strong soil; beds may now be prepared for them, and the plants should be ridged out when in rough leaf. Continue to set pots of strawberries into the frames and vineries, &c., in succession; kidney beans should be sown in succession; mushroom beds made up; sea-kale beds should be covered up with leaves and dung, in portions. Prepare dung for making up beds and linings as it may be wanted.

PARK, PLEASURE GROUNDS, AND PLANTATIONS.—Trees and shrubs may be planted, if deferred so long, but care must be taken in performing it; continue draining and fencing wherever they seem necessary.

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXXI.-APRIL, 1842,

REMARKS ON THE TREATMENT OF GESNERIAS, GLOXINIAS, &c.

BY M.

In the cultivation of Plants such as Gesneria, Gloxinia, &c., it is a very common practice, and one universally recommended, to allow the roots to become quite dry during their season of repose, which is generally through the winter months, and at the same time it not unfrequently happens that the pots containing the roots are taken to some situation where they are subject to a lower temperature: this course of treatment would appear to be suggested by the generally received opinion, that plants, especially tropical ones, require two distinct kinds of treatment, in order to elicit their natural beauties, namely, one of quietude, and followed by one of gradually increasing This view of the matter is undoubtedly a correct one, for no plant can continue in a healthy and vigorous condition, under a course of unremitted excitement; it is not, therefore, with the principle, that appears to have suggested this line of treatment above referred to, that I am disposed to differ, but, merely with the manner in which it is frequently carried out, and the degree in which the plants are subjected to it.

However plausible it may seem in carrying out the treatment, to permit the tuberous roots of the plants to become quite dry, it is practically found to be of some detriment to the vigorous and healthy blooming of the plant during the succeeding season. Many persons, in drying off their roots, permit them to become so much dissected, that they are literally shrivelled; now this is the state of things which I do not hesitate to pronounce injurious to the constitution of the plants in a high degree. It may be said that no person having a knowledge of the principles of plant culture, would commit such an error, and this I will readily admit: it is not, however, such persons

2 и

who need instruction, but those only, who, being novices, or not having time to enter deeply into these matters, cannot be expected to understand that of which they may not have heard. It is to them, then, that I address myself; and if this should meet the eye of any such as I have mentioned, and should be the means of culightening, in ever so trifling a degree, the gratification will be mutual. I will now endeayour briefly to state, as far as my experience will support me, the degree to which this resting principle may be advantageously First, then, as a principle, perfect quietude must be attained; from the time when the foliage and inflorescence of a plant have each been matured, the exciting element must be gradually lessened in its supplies, and this treatment must be continued until the plant is led, by easy gradations, to a decidedly torpid condition; but having reached such a state, every means should be taken to prevent the abstraction or evaporation of its juices. For this porpose, the bulb should be embodied in soil, sand, or any similar material, by which evaporation, caused by the action of the atmosphere on its surface, will, as far as possible, be prevented: this soil, or whatever material is thus employed, must, however, be dry, or the root, ever active when the means are within its reach, will abstract moisture from it: on the other hand it must not be dry, in a strict and extreme sense, or it will absorb the juices of the root, to a greater or less extent. The soil used, therefore, for such a purpose must be comparatively, but not absolutely dry, and, in this state it is desirable that it should be uniformly kept; the effect of this would be that the bulb, enjoying perfect repose, would still retain the elaborated food of its former mature growth, and this food when the root is again called into action, would serve as a means of invigorating the infant shoots and fibres: and, consequently, the growth of the plant would be more perfect and satisfactory than could have been the case had this store of food been rendered unavailing by the extremely exsiccated state of the bulb.

I have before made a brief allusion to the removal of the roots to a cooler situation while resting. This treatment is erroneous; the situation afforded them, though dry must be warm, and no apprehension need be entertained for their safety when thus treated: for heat, unaccompanied by moisture, will not be at all liable to excite them at an unseasonable time.

I have already said, that no plant can thrive for any length of time under continued excitement; repose, of a nature suited to their organisation, is needed by all things which are endued with vitality, the vegetable no less than the animal creation: and this applies not only to the two grand seasons of growth and rest, to which plants are subjected, but also during the former season into the alternatives of day

and night. Whilst other causes may render it necessary that the night temperature to which growing plants are subjected, should be lower than that during the day, it cannot certainly be without some reference to the supplying of that repose to which we have been referring; nature points out the period when this should be afforded, for plants cannot assimilate their food in the dark, and, therefore, we have a clear argument, that during that period of the day, they should not be admitted to any undue excitement.

Whilst on this subject, I cannot help reverting to a practice which has its disadvantages, although its origin may readily be traced to principles as radically correct as those generally entertained on the subject which has been noticed above. I refer, now, to that of raising the bulb of this and similar plants above the surface: this practice. without doubt, originated in the correct idea that the collar of a plant, should never be heedlessly embedded in soil, a general principle which does not admit of dispute: in the present case, however, it is found to have the effect of increasing the size of the bulb, but owing to the extended evaporating surface, the plants do not usually, under such circumstances, attain that vigour of foliage and flowers. which it would have been quite natural to have expected. Having, thus the results practically ascertained and placed before us, we can readily adopt the course which may appear most desirable. Those who have a sufficient number of plants, would doubtless find it advantageous to alternate these two modes of treatment, namely, to elevate the bulbs one season, in order to increase their capacities, and impart a greater vigour to their blooming the following season, when planted deeper in the soil. It must, however, be recollected, that the bulbs, in this latter case, must not be buried in the soil; if I may be allowed the expression, the depth at which they may be advantageously placed, is so that the crown of the bulb may be about level with the surface of the soil in the pot. When this course is adopted. the most diligent care must be taken not to supply water too liberally during the early stages of growth; afterwards, however, a bounteous supply is indispensible. In applying it, it should be poured cautiously around the outer edge of the ball of earth, next the rim of the pot, for in this situation are the fibrous roots which take up the soluble food. and convey it into the system of the plants. This remark applies equally to the application of water to plants in pots at all times, and under all circumstances.

ACCOUNT OF AN EXPERIMENT IN ROOT PRUNING PEACH TREES.

BY A CONSTANT READER.

I have for the last five years been greatly disappointed in my crop of Peaches, owing to the luxuriant state of some of my trees; one in particular, on which I had expended much pains, I could never induce to produce any bearing wood, but a useless mass of spongy sapwood, which never produced a single blossom bud. After trying various minor plans to check this exuberance of growth, such as recurving and stopping the shoots, and at nailing time, laying in all the wood I possibly could, and this, year after year, without producing the results I desired; I had recourse to root pruning, which I have found to answer my wishes, by inducing the tree to assume a less inordinate growth, and to produce flower buds. On doing this, I removed the whole of the soil, consisting chiefly of black loam, and substituted in its place a compound of road drift, clay, and gravel; the result is, that now every branch is covered with blossom buds, and if the season should prove favourable, I anticipate a fair crop, as the tree is looking well. It must be remembered that the tree is old, and liable to a great many failures, but if it will only bring forward half a crop, I shall think my trouble repaid; and as time can only prove what the permanent result will be, I must defer saying any more about it till the autumn. I do not think one year a sufficient proof to test every particular, and perhaps the crop may not mature to my satisfaction; but that I will let you know in the autumn. Should these remarks be of use to the public, you may, through the medium of your Magazine, lay them before your readers.

Norwood, March 5, 1842.

[We trust our correspondent will send us the further particulars in autumn, respecting the maturation of his crop of fruit. We feel almost inclined to think that had our correspondent lifted his trees, and pruned away the coarse and rank portion of the roots, that the results would have been similar, without the substitution of fresh soil; the age of the trees may have rather had the effect of deterring from such an operation, but we should have anticipated no failure had this been carefully performed. Root pruning is undoubtedly a valuable resource by which to restore luxuriant trees to plentifulness; but it is an operation which bears evidence of something radically defective, either in the formation of the border, or in planting the trees. These defects we believe to be deep over stimulating and imperfect drained borders, and by far too little attention paid in planting to keeping the roots near the surface, and secured in an horizontal direction, and placing the collar of the plants somewhat above the general level of the surface.—ED.]

REMARKS ON CLIMBING PLANTS.

BY SCANDIX.

The cultivation of climbing plants, though far from being carried out to the extent which they are deserving of, is still a feature which is daily becoming more interesting, on account of the many additions which have, within a short time, been made to their number; whether they are viewed as trained, and elegantly festooned on appropriate trellises, and the pillars of stoves and greenhouses, or their roots circumscribed within the limits of a pot, and their branches trained over an ornamental trellis, thus forming distinct and attractive objects; whether supported against the conservatory wall, in the domain of the wealthy, or the humble dwelling of the cottager, or whether destined to lend their aid to screen the inmost recesses of the arbour from the piercing ray of the noon-day summer's sun; in any, or all of these cases, what class of plants is there which can be viewed with feelings of greater gratification, arising from their adaptation to these several positions, or which can at all dispute the palm with our present subjects.

But though in all these, and numerous other positions, climbing or creeping plants are pre-eminently appropriate, there are some kinds better adapted to some one of these situations, than to any of the others; thus, for instance, the stove and greenhouse species of Passiflora, from their free growing and robust habits, are better adapted for training on trelisses over the roof of their respective habitations, than they are for pot culture in its restricted sense, as the more space and scope they have given to their roots as well as their branches, the more abundant and satisfactory will be the production of their blossoms. A similar principle is applicable to many other genera, among others I may mention Allamanda, Baulinia, Bignonia, Ipomœa, Jasminum, Mandevilla, Cobæa, Thunbergia, and many others. Another section, with habits somewhat less luxuriant than the foregoing, seem to adapt themselves better to cultivation in pots, as distinct objects; and many, from their peculiar mode of growth, seem to indispensably require some course such as this, in order to elicit to a full extent the beauties which, under favourable circumstances, they are capable of unfolding: among these are some of the most beautiful of plants, whether it be for gracefulness of habit or the sterling beauty The following are some of the genera, of which of their blossoms. these are species adapted peculiarly to this mode of culture, Batatas, Ceropegea, Echites, Hoya, Ipomœa, Gloriosa, Jasminum, Philibertia, Stephanotus, Thunbergia, Brachyseme, Hardenbergia, Kennedya, Loasa, Manettia, Marianthus, Mamandya, Solanum, Sollya, Tropæolum, Zichya, and others. Chorezema spectabili, and one or two old and nearly forgotten species, and the delicate but charming little Gompholobiums, though, perhaps, scarcely climbing plants in a strict sense, are nevertheless, by their habits, sufficiently near to be classed with these for all purposes of culture; and, indeed, their peculiar habit would seem to point this out as pre-eminently the mode of treatment best adapted to display their beauty. Another division, would seem to include those greenhouse perennial and annual species, which thrive during summer in the open air: the best adapted for this purpose are, Cobæa, Eccremocarpus (Calempelis), Loasa, Lophospermum, Maurandea, Solanum, Tropæolum, &c.; with these for all purposes of culture, would be associated all hardy and half hardy annuals, of scandent habits, such as Adluma, Lathyrus, Tropæolum, Thunbergia, &c.

Amongst hardy ligneous plants, both deciduous and evergreen, are many very valuable climbing plants; generally their flowers are less attractive than those we have already alluded to; but their chief recommendation is, that of forming permanent screens, to hide unsightly points, and to vary by their trailing graceful habit, the rigid aspect of ligneous trees in general; of these, we may mention Clematis, Caprifolium Hedera, Lonicera, Rubus, Rosa, Jasminum, Aristolochea, Bignonia, Tecoma, Vitex, and Wistaria.

We must now retrace our progress back to the farther consideration of those first noticed; and here this opportunity must not be omitted to mention, a too common error in the printing and training of such plants: a desire to reduce the plants strictly within systematical limits. very frequently leads to a severe annual pruning, and a studious and regular disposal of the branches, till they assume a trim and orderly appearance, as if this were all that were desirable. But as the production of flowers is to be regarded as the ultimate object for which plants are cultivated, and as the easy gracefulness of nature, is, in such cases, to be regarded as more desirable than the formal and prudish dictations of art, hesitation cannot be indulged in, even for a moment, in pronouncing the course to which I have been referring, as that least of all likely to lead to satisfactory results. The following is the course I would recommend:-let the main branches be trained along the rafter, or trellis, as the case may be, and from this allow the lateral branches to hang down; it is these lateral branches which, in most cases, produce the blossoms, for the sake of which the plants are cultivated, and by removing them, a very great portion of the beauty of the plant is irrecoverably lost; neither is there anything disorderly in this mode of arrangement, for a little attention to thinning out the branches where they may happen to be crowded, will reduce the aspect of the plant to a perfectly orderly

arrangement, whilst the beauty of the plant will, in great part, be secured, or at least imitated. The pruning then, which the plants receive, should be with this strictly in view, and should consist merely in inducing young healthy shoots to supply the place of the old ones, when these latter may have become exhausted or unsightly. Another point to which we would direct attention is, that of supplying the plants with a due portion of extent for their roots, so that their whole appearance may be healthy, and not that languid sickly state in which creepers are too frequently seen from having exhausted their supply of food; this, however, should be in strict accordance with the principle of not affording too great an abundance of nutriment, for the effect of this would be to prevent, in a great measure, the production of flowers.

The treatment of those grown as specimen plants in pots, varies necessarily with the different plants so treated; those of naturally strong constitutions should be grown in nutritious soil, and be provided with pot-room proportionate to their ascertained wants, whilst more delicate ones should be provided with their peculiarly suitable composts, and the size of their pots also proportionably limited. It is not intended to enter into the details of treatment, these being similar to that of stove and greenhouse plants in general; but, we may remark, that the degree of shading and exposure should in all cases be conducted with discretion. An exposure to bright sunshine would prove injurious to some, whilst it would become necessary to others, and an exposure to the open air would have exactly similar effects; these are, therefore, considerations of importance. As far as regards the form of the trellises, on which such plants are trained, but little can definitely be said; it should, however, be a recognised principle, that stiffness and formality, no less than fastidiousness, should be avoided, and that the more natural and simple the form adopted, the more pleasing will be the result: for this reason, circular, or more properly speaking, cylindrical trellisses are for the majority of freegrowing plants decidedly preferable; whilst for more delicate ones, a flat trellis of circular outline is found as pleasing as any other form. This being taken as the principle, as a ground work of the system to be adopted, it admits of considerable variation, according to the taste and fancy of the operator, and the habit of the plant operated on.

The most pleasing form, taking a view of the subject, without regard to individual distinctions, in which climbing plants can be disposed when introduced into summer gardens, is that of allowing them to ramble ad libitum over the spray of a well selected branch of a tree. There is something which strikes the mind as natural in adopting this arrangement, and if due care and talent is called into exercise in carrying out the operation, there is nothing in it which

can be considered as harsh and offensive to the eye. Whatever artificially formed trellisses the tastes of individuals may lead them to adopt, it should be distinctly borne in mind that they should be painted of some colour as invisible as possible: for nothing can be in worse taste than that of having the support afforded to a plant of a more conspicuous appearance, than the plant itself, and this is the case wherever light colours are used: green, a very favourite colour for such purposes, cannot be regarded as a good one, being at all times, (unless rendered obscure,) of a more lively tint than the foliage of the plants about it.

ON THE EDUCATION OF GARDENERS.

BY J. H.

(Continued from p. 118.)

In a former paper, I noticed the studies which would be advantageous to the young gardener; and traced, in some measure, the effects of moral and intellectual education on human happiness. But as every man who has to make his living by his industry should be careful of his health, and economical in his expences, it is evident that those studies should be conducted without injury to health, and with a proper regard to economy. I formerly recommended some knowledge of the Latin and Greek languages; but it seems to be an obstacle with some how this knowledge is to be acquired. knowledge of Latin and Greek useful to a gardener may be acquired from "Hamilton's Translations." Let the student begin first with the "Gospel of St. John" in Latin, and with a little assistance from a teacher at the commencement, he will be surprised at the rapid progress he will make by the Hamiltonian system. The "Gospel of St. John" in French has been learned in eight days by this system, without any previous knowledge of the Latin.

But I wish to observe, that the time which is devoted to the different branches of education should be properly divided, so that too much time may not be given to what may be considered as partly an ornamental branch of education, and too little to that which is more essential. I trust that it is distinctly understood that I do not recommend a highly intellectual education, unless it is combined with moral improvement; as a mere intellectual education may do more harm than good, if a proper use is not made of it. I believe that a good man of moderate intelligence will go through life more happily and comfortably than a man of bad principles, though possessed of great intellectual endowments. However, science may be regarded as the

lever which is destined to raise individuals, societies and nations in the scale of intelligence, it is indispensable that this lever should be guided by a moral power; for the knowledge of morals and religion is of paramount importance, not only to a gardener, but to all the human race.

I wish to make a few remarks on some of the books necessary for study, and which may be somewhat scarce. "Hamilton's Translations" are published in London. "Cobbett's Grammar" is the best for private study. "Stewart's Geography" may be purchased for three shillings and sixpence, and is the most comprehensive that I know at the price. Books on the other departments of knowledge that I have recommended, are plentiful, in almost every part of the country.

From the rate of wages which young gardeners receive, it is not to be expected that they can afford much money to buy books. Notwithstanding this, I have observed, that those who really had a desire for knowledge, contrived to save money to purchase the books from which that knowledge could be obtained.

[It was our intention to have stated in a previous number of this Magazine that we differ in opinion from our correspondent, respecting the merits of the paper at page 113, on the Education of Gardeners. assure him he is mistaken in supposing that we consented to its publication from motives of friendship to its author, of whom, indeed, we know but little except from his communications in this Magazine. Our opinion of the paper, its merits, and the propriety of publishing it, is very decided; and we are willing to suppose that the note sent to us was an inadvertent epistle, and not a fair index either of his moral or religious opinions, and we do not doubt but he will thank us for omitting to publish them. Young gardeners owe not only to themselves, but to society, an obligation requiring of them, if they would be useful and respected in their stations, the acquirement of knowledge, vast and varied, beyond that which relates directly to their profession. We are so far from disapproving of the paper in question, that we most cordially recommend it to the consideration of those who are young and starting in life; nor do we hesitate to affirm that by following out the principles there recommended, they will find it the nearest and only safe way to prosperity and happiness .- Ep.]

ON THE CULTURE OF GLADIOLUS IN THE OPEN BORDERS.

BY E. H. K.

It is somewhat surprising that the flower garden should be so seldom ornamented by the introduction of Gladiolus and other genera of Cape bulbs. They are certainly very splendid in such situations, and their culture is not attended by any difficulties which are not easily surmounted; in the present paper, I propose making

a few brief remarks on Gladiolus, as an ornament to the parterre during the autumnal months. Like most other plants used for a similar purpose, it admits of cultivation in a variety of ways: thus, if planted in pots during February or March, and kept in a greenhouse until they have vegetated, and then removed to a cool frame until the beginning of May, they may be had in flower early in the summer; the more tender kinds, such as G. cardinalis, and its hybrids, ramosissimus, and others, require this treatment, in order to secure their growth sufficiently early in their season, to produce flowers. With more hardy kinds, as G. psittacina, this treatment may be adopted merely with a view to the production of a few early flowers; on the other hand, if these latter are planted out in beds of prepared soil about the middle of April, they produce a succession of their beautiful flowers, from the end of July until the middle of September.

The preparation of the soil is an important consideration in cultivating these plants successfully; this should be done early in the winter months, so that the soil may be benefitted by the action of the If the soil is very light, a portion of turfy loam should be incorporated with it; but if stiff and cold, a portion should be removed and placed with a mixture of road sand and peat earth, which should be well blended with the remaining portion of the natural soil: in either case it should be trenched up one foot-and-ahalf in depth, and left as roughly exposed to the weather as possible. A similar preparation should be made, whether it is intended to raise the plants in pots, and afterwards transplant them, or whether the roots are placed at once into the beds. Supposing the latter case, about the middle, or if mild weather, the beginning of April, let the beds be forked over, and marked out into rows one foot apart, and about four or five inches deep; in the bottom of this furrow place a little clear sand, and then place the bulbs at one foot distant from each other-around each bulb a little sand should be placed, and the soil levelled. The destruction of weeds by occasional hoeing is all the further care required, until the flower stems have attained a foot or so in height, they should then be carefully staked so as to preserve an orderly appearance. Just before they commence flowering, if the weather happen to be dry, they should have a few good waterings given them in the evenings; it is somewhat important not to water promiscuously, as some evil may result from the water lodging at the base of the leaves-it ought rather to be poured carefully on the soil between the plants. No further care appears to be necessary until the foliage is matured, and somewhat decayed, or at least, become well ripened; when this is the case, the bulbs should be taken up and well dried by exposure to the sun, and afterwards removed to an airy situation, free from both damp and frost, where they should

remain during the winter, until wanted the following season. The bulbs should be divided and planted singly, and those only used which are strong enough to flower; these are so readily produced, that the small offsets seldom need be retained, as they take some time before they have strength enough to produce flowers: for a similar reason, it is scarcely advisable to raise them from seeds, except with a view to produce new varieties.

The routine of treatment desirable for the more tender kinds, as already cursorily alluded to, consists in potting them early in March, and keeping them either in a greenhouse, or moderately close frame for a short time, and then removing them to a cold frame until the planting season arrives; they should be induced to grow as freely as possible here, at the same time, allowing them abundance of air. By the beginning of May, they may be planted out, in beds, prepared as already recommended. Their treatment subsequently does not differ from that already noticed.

The genus is rather a sportive one, and many very beautiful plants have been originated. When this is made an object, the seed should be sown about the beginning of March, in paus of light soil, such as a mixture of peat, leaf mould, and sandy loam. They should be covered with soil to the depth of about half an inch, and placed in a close frame, where they will soon vegetate. The only care they require is the occasional application of a little water, and protection from the ravages of snails and slugs. When their seasonal growth is completed, they should be ripened off in the usual manner, taking the precaution of not drying them too much, as they are liable to perish when such is the case: a cool place, if dry, is, therefore, most suitable for them. In spring, they should be moderately excited; and when fairly started, they should be transplanted into fresh pans or pots, in rather more nutritious soil than before. Encourage them to grow as much as possible during summer, and as late as practicable in autumn, and then rest them as before. The next season, the largest may be treated as recommended above for the tender kinds, and many of them will produce bloom.

Gladiolus psittacinus, and G. byzantinus are the best for treating as hardy bulbs; the latter is quite hardy, and will soon form a large patch, if the roots are left unmolested. G. psittacinus is quite hardy in favourable situations, but requires to be taken up, or its flowers are not so finely developed. G. cardinalis, though much less hardy than these, is yet sufficiently so to stand with a slight protection, but its growth is effected in that case too late in spring to mature its flowers.

The treatment of Ixia, and other half-hardy genera, may probably form the subject of a future communication.

REMARKS ON THE RUST ON GRAPES.

BY R. B. WILSON, GARDENER TO W. GREY, ESQ, NORTON, NEAR STOCKTON.

I am aware that much diversity of opinion exists among gardeners, as to the origin of the various diseases to which plants are liable; and, therefore, in laying before your readers a few remarks on the cause from whence arises, what is called, the rust on vines, I do so under the impression that a few really practical observations, and such as are founded on experience, are of much greater and more substantial use, than mere speculative opinions, however plausible, or well supported by theory. In the first place, it may be well to mention, that there are two sorts of rust, and these according to the result of my observations, arise from different causes: the one sort differing from the other, inasmuch as that, the disease never appears on both sides of a bunch of grapes, but only on that side of both the bunch and berries which are towards the sun. The origin of this state of the disease is as follows: in the process of thinning out the berries, it is usual for the operator to place himself in such a position as to have the bunch on which he is to operate between himself and the light, at the same time having his face rather above the bunch; such a position as this being found to be most suitable both for the eye and the arm. Now, in cases where the bunches are hanging thickly, and the operator is not very careful in his movements, he is liable to brush with his head the bunch immediately behind him, and should his head be uncovered, and in a state of perspiration, I have proved that the hair of the head, in such a state, if brushed against any bunch of grapes, will cause the sort of rust alluded to; this fact I have proved on some of the hardiest kinds of grapes, such as Hamburgh, White Nice, &c. Such being the cause in which this disease originates, its appearance in grape-houses is far from being creditable, not only as being caused by negligence, but also on account of its uncleanliness; although I condemn the error, I must confess having been guilty of it, or I should not have discovered its cause.

I will now proceed to notice another sort of rust, which, though less frequently met with, is, nevertheless, of a more serious nature, arising from a defective state either of the border, or the roots of the plants, or both: this state of the disease is distinguished from the former, by its extending promiscuously over the plants infected, and by its appearing on all sides of the bunches and berries, forming streaks around the circumference of the berries, varying in breadth, and for the most part extending in an horizontal direction with the footstalks. These diseased parts form a sort of hide-bound appearance,

so that when the berries are perfectly ripe, the infected parts do not swell out to their full extent. I have only witnessed two instances of this sort of rust, and the first of these I observed at Edgerston, in 1835, as already mentioned at page 172: at that place it had first appeared a few years previous to the date above given, and continued gradually to increase until 1837; about the end of January or beginning of February in that year, the border of one of the vineries was renewed, under the superintendance of Mr. Weir, the present excellent gardener, who having lived there upwards of twenty years previously, and having witnessed the effects produced by the renewed borders since, is confident that the evil proceeded from the roots; this being at the time his opinion, he was thereby induced to adopt remedial measures, and accordingly the borders were renewed in the following manner: in the first place, a trench eight feet broad, and three feet in depth, was taken out the whole length of the house, and at a distance of eleven feet from the front wall; a line was then stretched parallel with this wall, at three feet distant from it, thus leaving a portion of the border eight feet wide between it and the trench; the surface of this was then taken off to the depth of eight inches, and a trench was opened at one end four feet in width, thus forming an opening sixteen feet in width across the border; it was thus ascertained that the original drainage, at the bottom of the border had got choked up, and the subsoil being a retentive clay, it was found necessary to cut a large drain along the front of the border having cross drains leading along into it from near the front wall; the bottom of the opening was then covered seriatim with a thick stratum of lime rubbish, and free stone chippings; the eight feet of border next the house was trenched, the drains formed, and the portions covered with lime rubbish, &c., as the operation proceeded, until the whole was finished; the roots were taken up carefully with a fork so as to sustain as little injury as possible, and were turned back towards the house whilst the trenching was going on, and pruned back and again laid out nearer the surface as the trench was filled up: many of them had got down into the subsoil, and had thus been almost constantly immersed in water, owing to the imperfect drainage. The vines were of course pruned back after disturbing the roots to so great an extent. The whole of the soil of the border (excepting the eight inches taken from the surface), was removed to other parts of the garden; and the border made up again by mixing the fresh ingredients with the retained soil, these ingredients were fresh maiden turfy loam from a pasture well enriched by the addition of rotten dung, leaf mould, broken bones, and a little lime rubbish; the whole of this being as thoroughly blended together as possible, and carefully placed about the roots. This course of treatment had the desired effect; in 1838, there was not a rusted berry in the house, and the following year Mr. Weir did another house in a similar manner, and with equal success; this not only points out the origin of this kind of rust, but also clearly proves the benefit of root pruning the vine, to be as great as that which the same operation produces on other fruit trees: it may be well to mention that the plants in these two vineries were from seven to eight years old, up to some that had attained a great age. In preparing the compost above noticed, Mr. Weir obviously inclined more towards Dr. Lindley's doctrine than to yours; in the "Theory of Horticulture," by this gentleman it is stated, that vines cannot have too much dung, whereas, on the other hand, you gravely recommend none to be used; * in my opinion a medium quantity is decidedly preferable,

[At page 170, where we recommend shallow borders of maiden soil for the growth of vines, it must be borne in mind, that we referred to the case of those which were young and newly planted. Our attention had been directed to some of the sources of disappointment in the culture of grapes, and acting on the impression that the evil was a radical one, our remarks supposed a new border to be made, and young vines introduced; under these circumstances, we still adhere to our opinion, believing that a border of good maiden soil will be quite sufficient to establish and support a young vine previously to its being permitted to mature fruit; it is doubtless true, that under such circumstances, its growth will not be rapid, nor will it at first sight have the appearance of being superior to a luxuriant growing plant; but though it may not carry such an appearance, we believe that it is so; its growth will be moderate, but it will be healthy; its canes, though comparatively small, will be firm, well matured, short jointed, and furnished with strong prominent buds; and if treated with care for two or three years, (as every young vine ought to be treated, if permanent healthiness is an object), it will be then be in a condition to mature and bring to perfection a reasonable annual crop of grapes, provided all other circumstances are favourable. When, at this stage of its existence it is permitted to bear fruit, it will require an increased amount of nourishment, in consequence of having a greater burden to sustain; then we recommend the application of liquid manure, in a degree proportioned to the wants of the plant; not enough to surfeit it, but sufficient to maintain it in vigour. We think this course preferable to the admixture of sufficient manure with the soil to effect the same object, because the increased nourishment can in this manner be supplied just at the time, and in the degree in which it is wanted, without compelling the roots to submit to its continual stimulus, which must be the case to some extent, at least, when they are continually surrounded by it, in consequence of its being admixed with the soil: the immediate contact of the roots with manure in a solid state, we cannot think to be so beneficial as its application in a liquid form, so as to be readily taken up just at the time it is needed. What are the best ingredients of which to form this solution we will not stop to enquire; it is, however, highly probable that the employment of some of the chemical manures which now are engaging so much attention, would be preferable, and more economical, in some respects, than the use of the same elementary matters as they exist in a compound state in animal manure. Our worthy correspondent will see that we have not objected to the use of a medium quantity of manure, except in certain qualified cases, and, we think, that his opinion coincides with our own.]-Ep.

provided the vines are regulated both inside and ontside of the house in a workmanlike manner: it is true, we frequently meet with vines which are over luxuriant, even to such an extent, as to cause them to produce long jointed, and consequently bad bearing wood, but I must add, that in the majority of such instances which have ever come under my notice, these bad effects might have been obviated by judicious management. I do not mean it to be understood that I am an advocate for deep and over-nutritious borders; on the contrary, I have seen too much of their bad effects; but, I am of opinion, that these effects might be greatly obviated, if a proper line of treatment were adopted, such as a due attention to the ripening of the wood, and the adoption of a system of pruning, rather suggested by the actual condition of the vines, than by a pre-possession in favour of any particular system rather than another. It too frequently happens that a gardener adopts a system of pruning which he has previously found to answer, without examining the principles on which its success depends, the sole warrant of its accuracy being that he has seen it elsewhere adopted successfully, although soil and local circumstances might be widely different. To this error alone numerous failures are attributable, as an example of this, connected with this subject, how often do we find gardeners strictly adhering to a certain mode of pruning, because they will tell you it answers well at such a place, they will also inform you how many bunches are to be left to a rafter, and all this, frequently, without taking into consideration the length of rafter, the weight of the bunches, or the strength and general constitution of the vines, &c. &c.

Before closing this subject it may be well to mention a very important feature in vine culture, viz, that of grafting the weak and tender varieties on stocks of a more hardy and robust nature; for instance, the different sorts of Frontignans and Muscats, &c. are generally found to be delicate and susceptible of disease when grown on their own roots; whereas, if they are grafted upon the Syrian or White Nice, or other strong growing kinds, they become a great deal hardier, and produce much larger bunches and berries without at all impairing the flavour of the fruit. I am aware that many of your readers know this to be the case, and yet how seldom do we see it practised; the reason of this is, I suppose, that they do not receive them ready grafted to their hands from the nurseries like other fruit trees: were the Peach and the Nectarine as much neglected in this respect as the vine, the labour and care attached to their culture would be but badly repaid.

ON THINNING ANNUAL PLANTS.

BY C. H.

At this season, those who cultivate annual flowering plants, must be on the alert, to afford a timely thinning, for if left in the crowded state in which they are sure to spring up, they will prevent each other from attaining anything like an average degree of perfection. Much of the necessity of this operation may be obviated by sowing the seeds moderately thin in the first instance; but as in all cases it is necessary to deposit more seeds than can be permitted to remain, if they vegetate, there will be many plants to remove. If they are of rare or valuable species, they may be carefully taken up and transplanted into another part of the garden; if they happen to be of those kinds which are not required for such purpose, they should be pulled up, with reference only to the safety of those which are intended to be left. The number of plants which should be permitted to remain in a patch will vary according to the habits of the species; thus a large vigorous growing plant, of good habit, should stand as a single plant, whilst any of more straggling growth, two or three should be retained, and those sufficiently near each other, to form an outline of perfect unity, but not so as to appear crowded. In the case of less vigorous growing plants, about three plants should be retained, standing at regular intervals, so as not to appear a mere accidental combination; prostrate plants must be regulated by a similar rule, according to the multiplicity or paucity of their branches. In taking up the plants which are removed, care must be used, that those remaining are not injured by the operation, and that this may be the result, it should be done at as early a period as possible, that is, as soon as a few leaves are perfected. After thinning, more than ordinary diligence must be used to prevent injury from the depredations of snails, slugs, &c.; lime, from its caustic properties, is, perhaps, the best preventative, as it is not at all injurious to the plants, when applied in moderation, The staking of the kinds of upright habit, should also be attended to at an early period, and those of suitable habits should be pegged down to the soil, and will thus form very pleasing masses.

REFERENCE TO PLATE LXXII.

FUCHSIA, Brown's Prince Albert.

NAT. ORD. ONAGRACEÆ. CLASS OCTANDRIA MONOGYNIA.

We have had frequent occasion to revert to the improvements which have been produced in the characters of popular flowers, by the process of hybridization; the



.

Rose, the Pelargonium, the Calceolaria, the Dahlia, the Fuchsia, and numberless other genera, have each been submitted to such a series of improvement, that in many cases, all traces of their original characters have been obliterated, and in others, so far improved, that their previous claims upon public estimation are increased to an infinite extent. Nor can the almost boundless variety into which the diligent hand of science has caused these genera to sport, be at all reprobated; for if there be any pleasure and satisfaction arising from an inspection of the possession of a truly beautiful plant, it little matters whether that plant be what Botanists term a species, or whether it be only a seminal production: in the latter case, equally, at the least with the former, if it possesses good qualities, it has equal claims on public notice, and those claims are equally cheerfully responded to. In the genus before us, the originally popular species, produced, for the most part, a profusion of beautiful flowers, and had, besides, a gracility and elegance of habit, when grown to a large size, that kept them continually in favour. From amongst these, sprung up a race possessing various combinations of the good qualities of their parents; and, amongst them, appeared the kind known as the "Globe." This variety may be regarded as the first decided step towards a totally distinct and improved race; and the introduction and general cultivation of F. fulgens soon after, had the effect of rendering this improvement still more decided and permanent. Beautiful as were the older kinds, and profusely as their blossoms were produced, they had, at the same time, many of them a laxity of growth, which rendered them unfit for pot culture, except as large specimens; this character was, however, partly obliterated in F. globosa, and a dwarf compactness of habit secured, with, if possible, a more lavish production of blossoms. F. fulgens, on the other hand, was remarkable for its fine expansion of foliage, and for the different structure and arrangement of its blossoms, which, instead of being produced from the axils of the leaves, were collected into drooping racemes at the ends of the shoots. These various characters, then, are blended in the race which have been produced between these two kinds :- dwarfness and compactness of habit; luxuriant and vigorous foliage; an intermediate form of the flowers; and in their arrangement, not the raceme of F. fulgens, but such a multiplicity of axillary flowers, that even the profuseness of the older kinds is not at all to be compared to. The improvement of this race is now an object eagerly sought by many; and, doubtless, the intermixture of F. corymbiflora, splendens, and cordifolia, will have the effect of blending new characters with those already attained. whether or not, a general improvement will result, remains yet to be proved.

During the two past seasons, the varieties belonging to the class now referred to, which have been introduced to the floral public, have been very numerous, and all of them possessing good qualities, in a greater or less degree; none, however, which we have had an opportunity of seeing, are at all to be compared with the subject of the accompanying plate. Its fine dark green and conspicuous foliage; its strong and short jointed habit of growth; the lavish manner in which its blossoms are produced, from the axils of every leaf, and also from the extremity of the shoots, even to the prevention of its extensive propagation; the pleasing combination of colour, and the great size and majestic appearance of the individual blossoms, being upwards of two inches and a quarter from the tip of one sepal to that of the opposite one, are characters in which, as far as we are aware, this variety stands pre-eminent; this fact has suggested the appellation which has been applied to it. It was raised by Mr. Brown, of the Bedford Nursery, Hampstead-road, during the past summer, from seeds supposed to be of F. globosa Atkinsonii, impregnated by F. fulgens, and is the best which has yet bloomed, of about three thousand seedlings originated at the same time. Mr. Brown is

desirous of sending out plants by the latter end of July in the present year, if a sufficient stock can be obtained; the propagation of this kind is, however, rendered very difficult, in consequence of the disposition of the young shoots to produce blossoms almost before they are of sufficient length to be taken off as cuttings. The tendency of the plant under notice to produce blossoms in the manner described, renders it an almost impossible task to obtain, by ordinary culture, a large specimen in any moderate length of time; it is not improbable, however, but that a plant of larger size might be obtained in less comparative time by grafting a few scions on a judiciously selected stock; at any rate, the experiment is worth trying, not only with this, but with many of the other hybrids, whose liberal production of flowers also gives rise to a similar inconvenience.

NOTICES OF NEW PLANTS.

ANEMONE RIVILARIS, The Rill Anemone.

Bot. Reg.

NAT. ORD. RANUNCULACEÆ. CLASS POLYANDRIA POLYGYNIA.

A hardy perennial, growing about fifteen inches high, possessing something the habit of A, vitifolis, like which it suffers in winter more from moisture than cold. It was first raised from seeds sent by Dr. Falconer, from Saharunpur, but occurs in various parts of the north of India; and Dr. Royle describes it as common about Mussooree, and elsewhere, in the vicinity of water. It is frequently sent to this country amongst seeds from the north of India.

GODETIA ALBESCENS, Whitish Godetia.

Bot. Reg.

NAT. ORD. ONAGRACEÆ. CLASS OCTANDRIA MONOGYNIA.

A new hardy annual, with a remarkably stiff and compact habit, attaining about a foot and a half in height, and bearing deep pink flowers, merging to white in the centre. It is worthy of cultivation.

BABINGTONIA CAMPHOROSMÆ, Camphorwort Babingtonia | Bo

Bot. Reg.

NAT. ORD. MYRTACEÆ. CLASS ICOSANDRIA MONOGYNIA.

This plant, originally named Bæckia camphorosma, has now been separated from that genus by Dr. Lindley, on account of some differences in the disposal of the stamens, and some other minute particulars of structure. It is named in honour of C. Babington, Esq., of St. John's College, Cambridge, a most zealous and skilful botanist. It is a very graceful greenhouse shrub, cultivated without difficulty in a mixture of peat and leaf mould, flowering freely during the summer, from the ends of its pendant branches, and readily propagated by cuttings planted in sand, and covered with a bell glass. Mrs. Molloy, a lady to whom we are greatly indebted for seeds from the Vasse river, says, that it grows there in swampy land, to the height of seven or eight feet, resembling our Spiræa frutex, and in summer forming a delightful shade to the traveller crossing the swamps.

AMARYLLIS BANKSIANA, The Banksian Amaryllis.

Bot. Reg.

NAT. ORD: AMARYLLIDACEÆ. CLASS HEXANDRIA MONOGYNIA.

A very ornamental bulb, from the Cape, growing well in free rich soil, and apparently a variety of, or nearly related to, A. grandiflora. "The principal

points to be attended to in its cultivation, are to keep it in a vigorous and healthy state when growing, by placing it in a light situation, and giving it plenty of water, and when the leaves die off, to keep it warm and dry."

CIRRHOPETALUM MEDUSÆ. The Medusa's head Orchis. | Bot. Reg.

NAT. ORD. ORCHIDACE ... CLASS GYNANDRIA MONANDRIA.

A singular orchidaceous plant, growing well if fixed to a wooden block, and suspended from the rafters, taking care to pack a little sphagnum, or tufty peat, around the stems, to retain moisture. This most singular plant is a native of Sincapore, whence it was obtained by Messrs. Loddiges. In some respects it resembles C. vaginatum, but is a much larger plant, and very different in the form of its flowers. "Certainly, if ever there was a Meduas, his must be the prototype, before her Gorgon-ship's beautiful tresses were changed into serpents; nor are wanting the scales with which her form was safely guarded. We believe that this young lady was carried out of harm's-way into the ocean of India, by Neptune, and that all they tell us about Perseus having cruelly killed her is a fable, for is not here the proof!"

CATTLEYA ACLANDIÆ. Lady Acland's Cattleya.

[Pax. Mag.

NAT. ORD. ORCHIDACEÆ. CLASS GYNANDRIA MONANDRIA.

This splendid epiphyte was introduced from Brazil in 1839, by Sir T. Acland, Bart., in compliment to whose Lady it was named by Dr. Lindley, on its producing flowers soon after. Its dwarf habit, and the comparative size and richness of its blossoms, although not entitling it to claim an equality with C. labiata in the gorgeousness of its tints, or with C. crispa in delicacy, yet render it quite worthy of ranking near them as an ornamental epiphyte; the sepals and petals are of a brownish ground colour, spotted with purple, and the labellum of a rich rosy crimson. "Cattleyas, and this amongst the rest, do not need so high a temperature nor so much moisture, as the majority of orchidacem; requiring a kind of intermediate treatment, between the most decidedly tropical sorts, and those from colder localities. C. Aclandiæ, however, differs from its allies in flourishing best on a suspended log of wood, without any protection to its roots, except a little moss; the lowness of its growth fits it admirably for such a position, and it is both cultivated and seen to greater advantage under these circumstances. In winter it should receive hardly any water, and be kept entirely torpid."

BRUGMANSIA FLORIBUNDA, Many flowered Brugmansia. | Paxton's Mug.
NAT. ORD. SOLANACEÆ. CLASS PENTANDRIA MONOGYNIA.

A small evergreen shrub, differing materially from the older and well known species of the genus, most especially in the size of its flowers, and also in their being collected in a raceme of six or eight blooms, instead of being produced singly, as is usually the case. The flowers are bright orange-coloured, the calyx and corolla being of the same colour; the latter is small, the tube being apparently about an inch and a half in length, and not more than half an inch in its expansion. It is supposed to be a South American plant, and was brought to Messrs. Young, of Epsom, two or three years back, with whom it flowered abundantly in a stove during June and July, 1841, the plant being barely a foot in height. It is regarded as a stove plant, thriving with generous treatment in a moderate temperature. It is called B, parviflora, in the Clapton Nursery.

LOASA PENTLANDICA, Mr. Pentland's Lousa.

Paxton's Mag.

NAT. ORD. LOASACE ... CLASS POLYADELPHIA POLYANDRIA.

Most of our readers will readily call to mind Loasa lateritia, with its prodigal climbing stems and pretty brick-red blossoms. That species, although perhaps not possessing characters to render it a universal and permanent favourite, will yet be long and deservedly esteemed by a great majority of cultivators, being a decidedly ornamental plant when liberally and judiciously managed. Loasa Pentlandica, with a less ornamental labit than the former, possesses a more deeply verdant and graceful foliage, thickly covered with strong stinging hairs, and produces somewhat larger flowers; both, therefore, may be regarded as extremely ornamental plants, either when cultivated carefully in pots, or in the flower garden during summer. If planted out early, and allowed to trail naturally on the ground, Pendlandica is stated to grow and flower freely, forming a beautiful mass. One of the very best positions for these plants is, we think, in an elevated vase, training them around three or four stakes, about a yard high, and then allowing the branches to assume their own graceful attitudes.

PLANTS NOTICED BUT NOT FIGURED IN THE Bot. Reg.

MAXILLARIA SKINNERI.

"This, the facile princeps of all known Maxillarias, has at length flowered in the collection of the Rev. John Clowes, with a vigour and beauty that could not be exceeded in its native haunts. The flowers actually measure upwards of six inches across, from the tips of the lateral sepals, while the latter are nearly an inch and a half wide, at the broadest part. The colours of this flower are peculiarly delicate, the sepals being pure white, faintly tinged with crimson at the base; the petals of a more rosy hue, while the lip is almost covered with spots and streaks of the most brilliant carmine; the column again is pure white at the apex, and mottled with crimson spots at the base, while a number of woolly hairs are scattered on its under side. The habit of the plant is stately, and its growth free and vigorous, more nearly resembling M. Deppii than any other species. It is a native of Guatemala, and is another of the brilliant discoveries of the gentleman to whom I have ventured to dedicate it, and who, after an absence of four years in the most glorious countries of the New World, has lately returned once more in safety to the shores of his native land, in which I must be allowed to remark, there is scarcely a collection of any note, that is not more or less indebted to his enterprise and generosity." The foregoing memoranda were furnished by Mr. Bateman, and to them Dr. Lindley has appended the following :- " I gladly avail myself of Mr. Bateman's permission to publish the foregoing memoranda. The readers of the Bot. Reg. will remember, that another. Maxillaria Skinneri, has already been described in it (1840, Miscellaneous matter, No. 101, and our Vol 5, p. 112), but that plant, nearly allied to M. aromatica, is not what Mr. Bateman had called after Mr. Skinner, but a species far inferior in beauty, though very handsome."

ONCIDIUM ENSATUM.

A fine Guatemalan species, bloomed by Messrs. Loddiges.

PONERA STRIATA.

A singular orchidaceous plant, sent by Mr. Skinner from Guatemala, to Mrs. Wray, of Cheltenham, where it has bloomed,

ASPASIA EPIDENDROIDES.

Also sent from Guatemala, by Mr. Skinner, and also by Mr. Hartweg. It has flowered in the collection of Sir C. Lemon, Bart., Carclew.

SPIRANTHUS CERINA.

A singular terrestrial orchidaceous plant, from Guatemala, sent to the Horticultural Society by Mr. Hartweg.

MISCELLANIES.

We have been informed, on unquestionable authority, that Cypripedium insigne has been cultivated for some years in the open border of a garden in Lancashire.

HORTICULTURAL SOCIETY'S ROOMS, REGENT STREET, LONDON, FEB. 15TH. -Amongst the plants exhibited, were two species of Dendrobium, from Mrs. Lawrence-D. nobile, and D. Wallichii,-the latter appeared to be a variety, with smaller and less brilliant flowers. There were also two Heaths, Bilbergia bromeliæfolia, and Clivea nobilis, from the same collection. Mr. Edmonds, gardener to the Duke of Devonshire, exhibited a plant of Miltonia Russelliana. From J. Allnutt, Esq. were several varieties of Camellia; and from Mr. Gains, of Battersea, a seedling Cineraria, with bright crimson purple flowers, named Prince of Wales. The plants from the garden of the Society were Odontoglossum pulchellum, with spikes of white flowers, fragrant as violets; Bifrenaria aurantiaca; Oncidium leucochilum; a Maxillaria, something like aromatica, but not so sweet; Dendrobium nobile, and cucullatum; Mormodes lineatum, and cut flowers of Gesnera longifolia, and two varieties of Chimonanthus. Mr. Bissett, gardener to T. Williams, Esq., Cobham, exhibited three Enville Pineapples, of excellent growth; and from W. H. Pepys, Esq. were some Glout Morceau Pears. Mr. Charlwood exhibited some of his preserved Tomatoe Figs. From C. B. Warner, Esq. was a "Portable Horticultural Water Engine," the peculiarities of which, are a portable telescope branch, by which plants in an elevated position may be watered without difficulty, and a valve by which the stream may be instantly shut off. The supposed convenience of watering plants on an elevated shelf may sound very pleasing in theory; but practically, a pair of eyes had need be fixed in the telescope branch, in order to distinguish between the plants in such a situation which require water, and those which do not.

MARCH 1st.—The plants exhibited were rather more numerous. From Mrs. Lawrence was an extensive collection, of which the following were the most interesting:—Franciscea Hopeana, covered with its fragrant violet-coloured blossoms changing to white; Cerbera fruticosa, with long pink flowers, resembling the Madagascar Periwinkle; Cineraria splendida; Cœlogyne barbata, with a drooping spike of white blossoms; and a specimen of privet-leaved Jasmine. From S. Rucker, Esq. were, Odontoglossum stellatum; a new Lælia, with bright yellow flowers; and a new Dendrobium, with dull coloured flowers, of no beauty. From J. Beteman, Esq. were cut flowers of Cœlogyne nitida, Cyrtochilum maculatum, and an Epidendrum, called Clowesii, which proves to be a variety of E. fuscatum. Mr. Green, gardener to Sir E. Antrobus, sent a specimen of the beautiful vermillion-coloured Habranthus pratensis. From Mr. Fielden; gar-

dener to W. Linwood, Esq., were flowers of Cyrtopodium Andersonii. The plants of interest from the Society's garden, were two singular Begonias, sent from Guatemala, by Mr. Hartweg; one, named crassicaulis, produces a number of flower spikes, from the top of its thick stems, before the leaves appear: the other, vitifolia, has singular shaped leaves, but is not so desirable as the former: also, Pentlandia miniata, with its pretty scarlet tubes, and the beautiful purple Mirbelia ledifolia, and Salvia pulchella, from Guatemala. Mr. Errington, gardener to Sir P. Egerton, had some of the so called Newtown Pippin Apples, grown on a south wall; it was afterwards ascertained that they were the Dumelow's Seedling. Mr. Green had a brace of Cucumbers, from plants grown in pots: and Messrs. Chapman, of Brentford, sent a sample of their new [?] Potatoe. A paper was read from Captain Churchill, R.N., on the cultivation of Asparagus, at San Sebastian, in the province of Guipuscoa, North Spain. The Asparagus is grown in beds, about five feet wide, and from twenty one to sixty feet long. The beds have no previous preparation beyond digging and raking. In March, the seed is sown in drills, about three inches deep, and two feet asunder. When the plants are six inches high, they are thinned to about a foot apart: these thinnings are transplanted into similar beds, and watered once a day by one of the never failing rills that run through the flat on which the beds are formed. In the following March, a layer of night soil, a few inches thick, is laid on the bed, and dug in when the plants have done growing in the autumn. The Asparagus is fit to cut the third year after sowing; and in spring, a layer of leaves, about eight inches deep, is laid over the bed; and when the plants come through this, the cutting begins. By this treatment, Captain C. stated that he had seen Asparagus from two to six inches, and even more in circumference. He also observed, that at times, the roots of the plants were at spring tides under salt water, which the growers considered beneficial.

In all ages, in all climes—"by saint, by savage, and by sage"—the loveliness of flowers has been acknowledged. No sooner was the creation completed, than a "a garden was planted," and man put into it "to dress it and to keep it." Here, then, we have the very earliest Divine authority in favour of that fascinating pursuit; and it is the first occupation assigned to man from the beginning. What other is there so intellectual? so graceful? so fraught with all that is wonderful and beautiful? The glory of the wisest and wealthiest of Kings was not to be compared to "the lilies of the field." Every thing connected with flowers imparts gracefulness to the mind, delicacy to the thoughts, elegance and refinement to the imagination, and to these advantages we may add goodness and benevolence to the heart.—Floral Calendar.

Merthyr coal is strongly recommended for hothouse furnaces, and for open fires, when the object is a steady powerful heat, without much flame, and without the trouble of stirring. This coal makes no smoke, no clinkers: eighty tons produce as much steam as one hundred tons of Newcastle coal, and it requires less attendance, as it must not be stirred. The price is the same as that of Newcastle coal. It is used by the Rev. T. Williams, Hendon; G. Byng, Esq., Wrotham Park; T. Harris, Esq., Kingsbury; and Captain Trotter, Durham Park.—Gard. Mag.

The common Myrtle was a great favourite among the ancients, by whom it was held sacred to Venus. The name is said to be taken from that of Myrsine, an Athenian maid, a favourite of Minerva, who, suffering love to overpower her

wisdom, was changed into a Myrtle by her offended mistress, and taken pity on by Venus. Others say that Vonus, when she first sprang from the bosom of the sea, had a wreath of Myrtle on her head. The temples of this goddess were always surrounded by groves of Myrtle; and in Greece she was adored under the name of Myrtilla. Pliny says, that the Romans and Sabines, when they were reconciled, laid down their arms under a Myrtle tree, and purified themselves with its boughs. Wreaths of Myrtle were the symbols of authority worn by the Athenian Magistrates. The weapons of war were also formed of this tree; and sprigs of Myrtle were also entwined with the laurel wreaths worn by those conquerors, during their triumphs, who had gained a victory without bloodshed. The Roman ladies put the leaves of the Myrtle into their baths, persuaded that the plant of Venus must be favourable to beauty. The Myrtle has been known in England since 1597, and has been frequently noticed by British poets. Milton places it in the bower of Eve; and Spencer in his "Faerie Queene," has the following lines:—

Right in the middest of that Paradise
There stood a stately mound, on whose round top
A gloomy grove of Myrtle trees did rise,
Whose shady boughs sharp steel did never lop,
Nor wicked beasts their tender boughs did crop;
But like a girland, compassed the height
And from their fruitful sides fresh gum did drop,
That all the ground with precious dew bedight,
There forth most dainty odours and most sweet delight.

STEPHENSON'S CONICAL BOILERS .- Mr. Rogers's conical boiler has suggested the idea of this useful contrivance, which, like his, consists of a hollow cone, whose sides are filled with water, and whose centre holds the fuel. It is made of copper, doomed over, and has a very neat appearance. The fuel is supplied from a door near the top, and the water flows from the top of the dome, and returns at the bottom of the cylinder. The boiler is merely placed in a hollow iron stand, with a revolving grate on the top, by which the cylinder can be instantly emptied, and the refuse and cinders taken away. The advantages which this boiler seems to possess are, its portability, its neat appearance, and particularly its suitableness for small houses and pits, or for large houses as an auxiliary boiler; it may also be taken away at any time, by merely unscrewing the union pipes, and when it is again reset, it require no brickwork. The boilers can be made of any size; one which we saw was two feet high by fourteen and a half inches in diameter outside measurement; and, we are informed, that a boiler of these dimensions will heat two hundred or three hundred feet of three-inch pipes .-Gardener's Chronicle.

MONTHLY CALENDAR.

FLOWER GARDEN.—The division and transplantation of perennial flowering plants should be completed early in the month; hardy annuals may be sown, and some of half hardy kinds also, if desirable, by the middle of the month; thin out those of sufficient size, as early as possible, and protect them from snails, slugs, &c. Tulips and choice bulbs should be protected from heavy rains; and any early flowering ones, such as crocuses, &c., may be taken up when the

foliage is matured, and laid in some convenient spot; grass lawns must be frequently rolled and mown; weeds should be removed from gravel walks, and the walks frequently swept and rolled.

PLANT STOVE.—The directions given last month may be carried out according to circumstances. In syringing the plants, it is advisable not to fall into an extreme, in applying too much; as a saturated atmosphere will render shading necessary, which is undesirable, as productive of imperfect growth and a want of flowers.

GREENHOUSE.—The shifting of these plants may be carried on as they may require it; as the plants advance in growth, they should be carefully stopped and pruned from time to time, so as to preserve a bushy and compact habit of growth. Plenty of air should be admitted at all seasonable opportunities, and the general treatment at this season should be generous: see Calendar for last month.

PITS AND FRAMES.—These structures may now be occupied with many plants from the greenhouse, as well as those provided for planting out in summer; the treatment should, therefore, be generally similar to that given to greenhouse plants. The frame for forcing flowers will not now be required for that purpose, and may be therefore devoted to the uses above-named.

KITCHEN GARDEN.—Sow whatever may have been omitted, as directed last month; also additional succession crops of peas, beans, spinach, and salading, such as radishes, lettuce, mustard and cress, a little endive, &c.; a very little cauliflower may also be sown for autumn use; kidney beans should be sown on a warm border, and some also in boxes to transplant. Plant out cabbages and cauliflower sown in autumn, if any are remaining; prick out the young plants of the Brassica family sown last month, and sow a few more of the most useful kinds, so as to have a choice of plants; plant potatoes for main crops, earth up the advancing crops of all kinds frequently, and let the ground be often hoed, both to loosen the surface and also to destroy the weeds whilst they are young; clear fine weather should be chosen for this, whilst planting, on the other hand, is better performed in dull showery weather; fork over the beds of asparagus, and pulverise the soil; tie up the leaves of early lettuce for blanching; thin out the crops of such things as require it.

FRUIT GARDEN.—Disbud all kinds of wall fruit trees, rubbing off the foreright shoots; this operation, though especially required by the stone fruits, is of great advantage to all kinds of fruit trees: continue the protection to the blossoms until all danger from frost is past.

FORCING GARDEN.—Maintain a steady temperature in the pine stove, both in the bark bed, and the atmosphere of the house; water carefully, and give a slight syringing occasionally early in the afternoon; admit air at all seasonable times. Vineries require much attention in syringing, tycing, admitting air, thinning, and such like operations, all of which, in being put in practice, must be regulated by circumstances, as they exist. The same applies to peach houses; let the temperature be steadily maintained during the day, allowing it to fall a few degrees at night. Cucumbers and melons require the ordinary attention in stopping and regulating the branches, to have a due share of ventilation, and a steady temperature kept up; sow some for planting out on ridges. Strawberries in pots must be brought into the frames in succession; apply water liberally after they commence growing: kidney beans may still be sown in pots or boxes. In municom houses, the atmosphere must be kept moist, in preference to applying any water to the beds; fresh beds for summer may be made up.

PARK, PLANTATIONS, &c.—Let all draining, fencing, and road making be proceeded with, where it has been previously delayed.

THE

FLORICULTURAL MAGAZINE,

AND MISCELLANY OF GARDENING.

NO. LXXII.—MAY, 1842,

LIST OF PLANTS FIGURED IN THE BOTANICAL MAGAZINES, SINCE 1836.

Believing that a brief description and consecutive list of all the plants that have been figured in the Botanical Register, Botanical Magazine, and Paxton's Magazine of Botany, since 1836, would be acceptable, such a list we have, therefore, compiled at considerable expense, and hope it will be deemed not the least valuable portion of the present Volume. With the view to facilitate reference to this list, we have arranged it in alphabetical sections, under the following heads, viz.:—

Stove Plants, requiring generally to be kept during summer, at an average temperature of seventy-five degrees Fahrenheit, and in winter, about sixty degrees.

Greenhouse Plants, requiring to be kept during winter, only a few degrees above the freezing point.

Orchidaceous Plants, the usual treatment of which is, to give them more heat and moisture during summer than ordinary stove plants, and to keep them in a rather dry atmosphere, ranging from fifty-five degrees to sixty degrees during winter.

Half-hardy Herbaceous Plants, these need only be protected from frost, in frames, and similar coverings, they are usually cultivated in the open borders during the summer, and are valuable as objects of decoration for the parlour through the summer and autumn, and occupy an important place in every ornamental garden.

Annuals, Plants.

Hardy Herbaceous Plants.

Hardy Trees and Shrubs.

It may be proper to explain the observations which occur in the text, which are these:—B. R. Botanical Register; B. M. Botanical Magazine; P. M. Paxton's Magazine. The figures following each of the observations, refer to the figure or table in the several works where the species is figured and described.

VOL. VI.

2 L

STOVE PLANTS.

Achimenes rosea, B. R., 1841-65 Begonia octopetala, B. M. 3559 A beautiful species, requiring the treatment of Trevirana, now Achimenes coccinea. grandiflorus, B. Æschynanthus R. 1841-49; B. M. 3843. ramosissimus, P. M. 6-195 maculatus, B. R. 1841-28 The latter much resembles the preceding; they should be potted in moss, after being fixed on blocks 30 Allamanda cathartica, P. M. 8-77 An old, but a desirable stove climber. Angelonia Gardneri, B. M. 3754 A beautiful species. cornigera, B. M. 3848 An annual, not very attractive. Aphelandra cristata, P. M. 7-173 Anthericum glaucum, B. M. 3610 Ardisia odontophylla, B. R. 1892 Fragrant pink flowers. Aristolochia caudata, B. M. 3769 saccata, B. M. 3640 trilobata, P. M. 3-2 hyperborea, P. M. 6-53 Handsome climbing plants. Arthrostemma versicolor, B. M. 3678 Neat, but not very showy. Batatas bonariensis, P. M, 8-25 betacea, B. R. 1840-56 Very desirable climbers. Bauhinia corymbosa, B. R. 1839forficata, B. M. 3741 Barringtonia racemosa, B. M. 3831 Begonia Fischeri, B. M. 3532 sanguinea, B. M. 3520 parviflora, B. M. 3720 sinuata, B M. 3731 odorata, P. M. 4-123 The above are neat looking plants, but are not remarkable for their

beauty.

125; B. M. 3591

platanifolia, P. M.

monoptera, B. M. 3564 insignis, B. R. 1996 These are very gay and desirable species. B. insignis will thrive in a good greenhouse, but does not bloom so freely as in a stove. Bignonia venusta, P. M. 7-124 speciosa, B. M. 3888 Very handsome climbers. Boussingaultia basellioides, B.M. 3620Brownæa grandiceps, B. R. 1841-Caladium petiolatum, B. M. 3728 Callithauma virdiflorum, B. M. A bulbous plant, related to Coburgia. Canna Reevesii, B. R. 2004 Carica citriformis, B. M. 3633 A desirable fruit bearing plant. Ceropegia vincæfolia, B. M. 3740 stapeliiformis, B. M. 3567 Curious flowering plants. Chœtogastra gracilis, B. M. 3481 A showy Melastomaceous plant. Clerodendon fragrans, B. R. 1838speciossissimum, P. M. 3-217 These, especially the latter, are splendid plants. Clitoria ternatea, P. M. 7-147 A dwarf climbing plant, known also as Lathyrus spectabile. Convolvolus pentanthus, P. M. 6-219 Coleus barbatus, P. M 8-219 Colea floribunda, B. R. 1841-19 A stately plant. Costus speciosus, P. M. 4-245 A very fine Scitamineous plant. Coburgia coccinea, B. M. 3865 trichroma, B. M. 3867 Very handsome bulbous plants. B. M. Cooperia chlorosolen, 3482 pedunculata, B. M., Singular-looking bulbous plants.

B. M.

lateritia, B. R. 1950

*bulbosa, B. M. 3886

stricta, B. M. 3738

A handsome old plant. Curcuma Roscoeana, P. M. 7-1 A showy free-growing Scitamineous plant. Dichorizandra thyrsiflora, P. M. 3 - 127Dombey a cannabina, B. M. 3619 Related to Astrapæa. Drimonia bicolor, B. R. 1838-4 Not showy, but useful to cover the back wall of a stove; roots likeivy. Drosera filiformis, B. M. 3540 Requires a damp and shady situation. Echites suberecta, P. M. 7-101 A very showy c'imber. Euphorbia Bojerii, B. M. 3527 jacquinistora, B. M. 3673 Known also as E. fulgens, P. M. bupleurifolia, B. M. 3476 The two first very ornamental plants, the latter a curious one. Enterpe montana, B. M. 3874 A palm, known also as Areca moutana. Franciscea latifolia, B. M. 3907 A splendid plant, with broad leaves, and copious terminal racemes of flowers. Gardenia pannea, B. R. 1952 A coarse-looking plant. Gastrochilus pulcherrimus, P. M. 7-75 A pretty Scitamineous plant. Galactodendron utile, B. M.3724 The cow tree of Humboldt. Goldfussia glomerata, 3881 P. M. 8-121 A very handsome and free blooming plant. Gesnera tuberosa, B. M. 3664 Figured as G. rupestris, in Paxton's Magazine, 5-53; a very dwarf and pretty species.

Gesnera *Douglasii verticillata, B. M. 3612 ; P. M. 6-29 *Sellowii, P.M. 4-27 *discolor B. R. 1841-63 *faucialis, B M.3659

Cuphea Melvilla, P. M. 8-197

267 Gesnera Marchii, B. M.3744 cochlearis, B. M. 3787 *Lindleyi, B. M. 3602 sceptrum var. igneum. B. M. 3576 *oblongata, P. M. 6-103 *mollis, P. M. 8-243 B. M. 3815 *zebrina, P. M. 8-271 A beautiful genus, every member of which is worth cultivating; those marked (*) are the best of those enumerated above. Gloxinia rubra, P. M. 7-271 maxima, P. M. 5-219 Grabowskia duplicata, B. M. 3841 boerhaavifolia, B. R. 1985 Not at all showy. Guaiacum officinale, B.R. 1839-9 Hæmanthus tenuislorus, Mozambicensis, B. M. 3870 Heliconia braziliensis. P. M. 3-193 Hibiscus Cameroni, P. M. 8-3

A very showy species. Hippeastrum ambiguum,

longiflorum, B. M. 3542 brevisorum B. M. 3549

solandriflorum, B. M. 3771

Showy bulbous plants. Hoya coriacea, B. R. 1839-18 A curious species, requiring to be grown on a block of wood, and

planted in a pot of moss. Impatiens scapiflora, B. M. 3587 P.M. 5-101

A tuberous rooted stemless Balsam, known also as I. acaulis.

Ipomæa Horsfalliæ, P. M. 3-50 bonariensis, B. M. 3665 Platensis, B.M. 3685 batatoides, B. R. 1841-36 Splendid climbers.

Isomeris arborea, B.M. 3842 A plant of no great beauty. Ixora grandiflora, P. M. 3-75 Ismene Macleana, B. M. 3675 amancaes, P. M. 3-267

Handsome and fragrant bulbous plants.

Lemonia spectabilis, B. R. 1840-

A very desirable and free-flowering Rutaceous plant, with crimson blossoms.

Lasiandra petiolata, B. M. 3766 A showy Melastomaceous plant,

Leonotis nepetæfolia, B. M. 3700 A tall growing coarse species.

Manettia cordifolia, B. R. 1866 Marlea begonifolia, B. R. 1838-

A plant of no great beauty.

Mucuna pruriens, B. R. 1838-18 A luxuriant climber, with long racemes of handsome purple flowers. Musa Cavendishii, P. M. 3-51

Valuable as a fruit bearing plant, of dwarf habit.

superba, B. M. 3850

Nepenthes distillatoria, P.M. 4-1 The Chinese pitcher plant.

Nelumbium luteum, B. M. 3753 Orthosiphon incurvus. B. M. 3847 A very neat Labiaceous plant.

Osbeckia cauescens, B. M. 3790 A handsome Melastomaceous plant.

Oxalis fruticosa, B. R. 1841-41 Barrelieri, B. M. 3748

Two curious shrubby species of Wood

Passiflora kermesina, B. M. 3503 Pavonia Schrankii, B. M. 3692

A free-growing plant, with showy flowers, but rather coarse habit. Pavetta Caffra, B. M. 3580

A neat shrubby plant.

Petrea Stapelsiæ, P. M. 4-199 A very showy climbing plant.

Pereskia aculeata, B. R. 1928 Bleo. B M. 3478

Philodendron crassinervum. M. 3621 B. R. 1958

A climbing plant, related to Pothos. Phlogacanthus curviflorus, B. M. 3783

Not at all showy.

Physianthus auricomis, B. M. 3891

A handsome climber.

Posoqueria versicolor, B. R. 1841-

A handsome stove shrub, with peudulous fragrant flowers. Poinciana pulcherrima, P. M.3-3

Poinsettia pulcherrima, P. M.4-97; B. M. 3493

Puya heterophylla, B. R. 1840-71 A pretty Bromeliaceous plant.

Roella elegans, P. M. 6-27

A very pretty Campanulaceous plant. Rondeletia odorata, B. R. 1905 Rytidophyllum auriculatum, B. M. 3562

A coarse-growing plant, allied to Gesnera.

Ruellia ciliatiflora, B. M. 3718 A handsome species.

Russelia juncea, P. M. 4-79

Schweiggeria pauciflora, B. R. 1841-40 A stove shrub, flowers not showy.

Solanum fragrans, B. M. 3684 An arborescent species, with inelegant flowers.

Herbertianum, P. M. 5-

269 A very handsome shrubby species. Stevia breviaristata, B. M. 3792 Not very showy.

Stenomesson croceum, B.M. 3615 A charming little bulbous plant. Strobilanthes scabra, B. R. 1841 -

> sessilis, B. M. 3902 Sabiniana, B. M.

3517 Very pretty and free flowering plants.

Spathodea pentandra, B. M. 3681 A noble Bigoneaceous tree.

Sinningia Youngeana, P. M. 7-

A very handsome hybrid.

Tweedia cœrulea, P. M. 6-125 versicolor, B. M. 3630

Very pretty plants. Torenia cordifolia, B. M. 3715 A pretty free flowering annual.

Tabernæmontana dichotoma, B. R. 1841-53

A noble and fragrant flowered plant. Thunbergia Hawtayneana, P. M. 6 - 147

grandiflora, P. M. 7-

Very handsome blue flowered species. caraccasana, Wigandia

1966

A pretty shrub.

GREENHOUSE PLANTS.

Abutilon striatum, P. M. 7-53
Acacia vestita, P. M. 3-145
oxycedrus, P. M. 7-151
prominens, B. M. 3502
longifolia, P. M. 4-197
pulchella, P. M. 4-198
Astelma eximia, P. M. 5-103
Alstræmerialigtu, B. R. 1839-13
Agave Americana variegata, B.
M. 3654
saponaria, B. R. 1839-55
Anigozanthus coccineus, P. M. 5-271

Manglesii, B. M.

3875

var. angustifolia, B. R.

2012 37

var. bicolor, B.R. 1838-

flavida, B.R. 1838-

64

Interesting plants, deserving of cultivation.

Amaryllis psittacina hybrida, B. M. 3528.

Actus ericoides, P. M. 5-51

A pretty and free flowering sp.

A pretty and free flowering species, resembling Dillwynia. Aristolochia ciliata, B. M. 3756

A curious flowered, scarcely climb ing plant.

Aptosimum depressum, B.R. 1882
A pretty undershrub, allied to Ruellia.

Azalea indica variegata, P. M. 7-175

Rawsonii, P. M. 3-123

These are among the many very beautiful plants which compose the greenhouse section of the genus.

Angelonea salicaræfolia, P. M. 5-75

Banksia occidentalis, B. M. 3535 Barnardia scilloides, B. M. 3788 A small inelegant bulb.

Beaufortia decussata, P. M. 8-269 Bignonia Tweediana, B. R. 1840-45 Bigonia capreolata, P. M. 8-245

Very handsome climbers.

Blandfordia grandiflora, P. M. 7-219

Bossiwa tennicaulis, B. M. 3895 disticha, B. R. 1841-55 Beautiful New Holland plants.

Boronia crenulata, B. M. 3915 B. R. 1838-12

triphylla, var. B. R. 1841-

Handsome shrubs—the latter is synonymous with B. ledifolia of Paxton's May. 8-123.

Brunonia Australis, P. M. 7-267 A pretty perennial plant, with flowers something like Jasione.

Brugmansia Waymanni, P. M. 4-241

A handsome species, with double corollas.

Callistemon microstachyum, B. R. 1838-7 Callostemma carnea, B. R. 1840-

26 lutea, B. R. 1840-

Very pretty bulbous plants.
Callistachys longifolia, P. M. 8-

linearis, B. M. 3882
Tall growing plants.

Calectasia cyanea, B. M. 3834 Camellia Japonica var. Donkelaeri, B. R. 1854

Jap. Albertii, P. M. 8-

Pressii rosea, P. M. 5-171

reticulata, P. M. 3-101 Cereus multiplex, B. M. 3789

53

Martianus, B. M. 3768 pentalophus var. subarti-

culatus, B. M. 3651 speciosissimus hybridus, B. M. 3822, (syn. C. Malli-

sonii, C. Smithii) latifrons, B. M. 3813 Napoleonis, B. M. 3458

В. Cereus serpentinus, B. M. 3566 Diplokena Dampierii, Ackermanni, B. M. 3598 1841-64 Chironia trinervis, P. M. 3-149 A singular Australian shrub. Diplopeltis Hugelii, B. R. 1839-A very handsome plant. Chorozema Henchmanni, B. M. A small shrubby plant, with neat 3607 pink flowers. ovata, P. M. 4-153 Dracophyllum capitatum, B. M. cordata, B. R. 1838-3624 10 A pretty Epacridaceous plant, with Dicksoni, P. M. 8-173 heads of white flowers. spectabile, B. R. 1841-Dryandra longifolia, P. M. 3-171 45; B.M. 3903 pteridifolia, B.M. 3500 varium, P. M. 6-175; tenuifolia, B. M. 3513 B. R. 1839-49 Echeveriasecunda, B. R. 1840-57 These are among the most beautiful lurida, B. R. 1841-1 of greenhouse shrubs-C. spectaracemosa, B. M. 3570 bile has a twining habit. Very pretty succulent plants. Chilodia scutellarioides, P. M. Echium giganteum, P. M. 5-149 5-195 Echinocactus Ottonis, B. R. A very neat Labiaceous shrub. 1838-42 Chrysocoma squamata, B. M. scopa, B.R. 1839-24 3625 A New Holland species of little Eyriesii glaucus, B. beauty. R. 1838-31 Clianthus puniceus, B. M. 3584 tubiflorus, B.M. 3627 carneus, B, R. 1841-51 corynodes, B. A twining species. 3906 Comesperma gracilis, P. M. 5-Mackieanus, B. M. 145 3561 A pretty twining plant of delicate sessiliflorus, B. M. habit. 3569 Coræra longiflora, P. M. 7-195 mammillarioides, B. Harrisii, P. M. 7-79 M. 3558 Very pretty hybrids. Enkianthus reticulatus, P. M. Convolvulus scoparius, B. R. 5-127 1841-43 Epacris coccineus, P. M. 6-123 A singular shrubby species, with small white flowers. variabilis, P. M. 4-125 Cystanthe sprengeloides, B. M. impressa, P. M. 4-126 3826 var. parviflora, B. R. 1839 19 A curious shrubby plant, with the microphylla, B. M. 3658 aspect of Sprengelia obtusifolia, B. M. 3775 Cyclogyne canescens, P. M. 7-Epiphyllum Russellianum, B.M. 199 3717 An ornamental plant from the Swan truncatum violaceum, River-allied to Astragalus. Daphne Japonica, P. M. 8-175 P. M. 8 79 Danbenya fulva, B. R. 1839-53 Elæodendron capensé, B. M. A singular Liliaceous plant. 3835 Davesia ulicina, P. M. 4-29 A handsome evergreen, with insig-Dillwynia speciosa, P. M. 7-27 nificant flowers. glycinifolia, P. M. 4-Elisena longipetala, B. M. 3873 99 Ornamental and fragrant bulb. Erica Banksiana, P. M. 7-243 Handsome New Holland plants.

Erica Macnabiana, P. M. 7-126 chloroloma, B. R. 1838-17 tricolor superba, P. M. 6-3 Jacksonii, P. M. 8-149 florida campanulata, B. M. 3639Eutaxia pungens, P. M. 3-245 Known also as Dillwynia pungens. Euthales macrophylla, B. 1841-3 A very showy perennial plant; flowering best if confined in a compa-

ratively small pot.

Fabiana imbricata, B. R. 1839-59 A graceful small shrub, bearing delicate tubular white flowers. Gardoquia Hookerii, P. M. 3-

Genista monosperma, B. R. 1918

bracteolata, B. R. 1840-23 Known as Cytisus racemosus.

Gompholobium polymorphum, P. M. 6-151 versicolor, B. R.

1839-43

Very handsome trailing plants, of delicate habits.

Grevillea dubia, B. M. 3798 Habrauthus Andersoni v. Texanus.

B. M. 3596 Hakea dactyloides, B. M. 3760 Hardenbergia digitata, B. R.

1840-60 macrophylla, B. R. 1862; P. M. 8-267 Comptoniana, P.M.

8-27

Splendid climbing plants, which should be in every collection.

Heimia salicifolia var. grandiflora, B. R. 1841-60

A very pretty hardy greenhouse shrub.

Hovea Celsii, P. M. 3-241

pungens, P. M. 6-101 Manglesii, B. R. 1838-62 Beautiful New Holland shrubs.

Heterotropaasaroides, B.M. 3746 A curious dwarf plant, related to Asarum.

Hibiscus splendens, P. M. 3-147 Wrayæ, B. R. 1840-69 multifidus, P. M. 7-103 Hibiscus lilacinus, B. R. 2009

These are very handsome species; the two latter much resemble each other, and together with H. Wrayæ, are from the Swan River. H. lilacinus is probably a half hardy kind.

Hypocalyptus obcordatus, B. M. 3894

A Cape shrub, related to Crotalaria. Hypoxis stellipilis, B. M. 3696 Illicium floridanum, P. M. 5-147 Inga Harrisii, B. R. 1839-41

A pretty climbing shrub, with crimson tassels of stamena; it requires a temperature intermediate between a greenhouse and stove. Ismene virescens, B. R. 1841-12

Ipomœa ficifolia, B. R. 1841-13 longifolia, B. R. 1840-21

A very pretty species, with branchless stems, about five feet in length; it is said to be half hardy.

tyrianthina, P. M. 8-73 Learii, P. M. 6 - 267(syn.) Pharbitis Learii, B. R.

1841-56

rubro-cœruleo, P.M.3-99 These splendid climbing plants are deserving of universal cultivation. Isopogon Baxteri, B. M. 3539 Jasminum glaucum, B. R. 2013

An old greenhouse climber, well adapted for pot culture.

Kennedya splendens, P. M. 3-26 nigricans, B. M. 3652 Stirlingii, B. R. 1845

Graceful climbing plants. Lisianthus Russelianus, P. M. 6-31; B. M. 3626

A most beautiful biennial. Lechanaultia biloba, P. M. 8-151 Lepismium myosurus, B.M. 3755

commune, B. M.3763 Singular Cactaceous plants.

Lasiopetalum macrophyllum, B. M. 3908 A robust species.

Lachenalia pallida v. cœrulescens, B. R. 1945

Lobelia Bridgesii, B. M. 3671 Cavanillesii, B. M. 3600

Handsome and free flowering plants; the latter nearly allied to Siphocampylos.

B. R. 1839-68

Pentlandia miniata, v. Sullivanica, Mammillaria atrata, B. M. 3642 floribunda, B. M. 3647 tenuis, B. M. 3646 Lehmanni, B.M. 3634 Mandevilla suaveolens, B. R. 1840-7; B, M. 3797 A beautiful and fragrant climber, related to Echites. Marianthus cæruleo-punctatus, P. M. 8-247; B. M. 3893 A charming little climber, for pot culture. Marica gracilis, B. M. 3713 humilis var. lutea, B. M. 3809 Martynia diandra, B. R. 2001 fragrans, B. R. 1841-6 A lovely species. Melocactus depressus, B. M. 3691 Mirbelia speciosa, B. R. 1841-58 floribunda, P. M. 8-103 Nearly related species, of which the latter is the best. Muraltia heisteria, P. M. 4-150 stipulacea, P. M. 4-149 Better known as Polygalas. Nerium thyrsiflorum, P. M. 3-73 Opuntia monacantha, B. M. 3911 decumbens, B. M. 3914 Ornithogalum conicum, B. M. A large handsome flowered species." Pancratium calithinum. P. M. Passiflora incarnata, B. M. 3697 Related to P. edulis. nigelliflora, В. M. 3635 Tucumanensis, B. M. 3636 verrucifera, в. 1840-52 onychina, B. R. 1838-21 Mooreana, B.M. 3773 The above are interesting species, but not remarkably showy. Patersonia sapphirina, B. R.

1839-60

A beautiful Iridaceous plant.

A very pretty, small, Amaryllidaceous plant. Phalocallis plumbea, B. M. 3710 An Iridaceous plant, of but little attractiveness. Petrophila acicularis, B. M. 3469 A Proteaceous plant, of no beauty. Pharbitis diversifolia, B. R. 1988 Philibertia grandiflora, P. M. 6-7 B. M. 3618 A slender climbing plant, of considerable beauty. Phycella bevituba, B. R. 1943 A beautiful Amaryllidaceous plant. Pimelea hispida, B. R. 3459 Hendersonii, B. M. 3721 nana, B. M. 3833 incana, B. R. 1838-24 spectabilis, B. M. 1841-33 These, (especially the last), are beautiful plants, and are worthy of a place in every collection. Placea ornata, B. R. 1841-50 A very pretty Amaryllidaceous plant. Podolobium staurophyllum, P. M. 4-171 Polygala myrtifolia v. graudiflora B. M. 3616 Portulaca Thellusonii, B. R. 1840-31; P. M. 8-29 A beautiful tender annual, requiring to be grown in old lime rubbish and leaf mould; it succeeds if placed at the foot of a south wall in summer. Prepusa Hookeriana, B. R. 3909 An herbaceous perennial plant, with much inflated crimson calyces, and white-limbed corollas. Roellia ciliata, P. M. 7-245 An old, much neglected, though beautiful plant. Rehmannia chinensis, B. R. 1960 B. M. 3653 A hardy greenhouse plant, related to Digitalis. Rosa Devoniensis, P. M. 8-169 A beautiful tea scented hybrid. Roscoea purpurea, B. R. 1840-61 Scitamineous plant, related to

Zingiber, (the Ginger); halfhardy.

Rhododendron arboreum, var. cin-

namomeum, B. R. 1982

Rhododendron arb, cinnamomeum, var. roseis, B. M. 3825 Gibsonii, P. M. 8-

217

The latter was introduced from the Khoseea hills of India, where it forms an undershrnb; it partakes of the habit and character of the Chinese Azaleas, and produces large white flowers, tinged with pink.

Salvia linarioides, P. M. 7-77

A neat and elegant species, with pale blue flowers.

Sarracenia rubra, B. M. 3515 purpureum, P. M. 3-221

Senecio Heritieri, var. cyanophthalmus, B. M. 3827

A variety of the old Cineraria lanata of the gardens, with a white ray, and deep blue disk.

Sida Bedfordiana, B. M. 3892 picta, B. M. 3840

Handsome Malvaceous shrubs, the latter is synonymous, with Abutilon striatum.

Siphocampylos bicolor, P. M. 4-195

Solanum campanulatum, B. M. 3672

Has the appearance of a Physalis.
macrantherum, B. R.

1841-7

A pretty free flowering half shrubby species.

jasminoides, P. M. 8-5 A graceful climbing evergreen shrub. Sollya heterophylla, B. M. 3523

linearis, B. R 1840-3

Much resembling each other, the

difference consisting chiefly in the width of the foliage.

Sowerbæa laxiflora, B.R. 1841-10

A pretty Liliaceous plant: Sprekelia Cybister, B. M. 3872

Sprekelia Cybister, B. M. 3872 var. brevis, B. R. 1840-33 glauca, B. R. 1841-16

Pretty Amaryllidaceous plants, related to the well known Jacobæan Lily.

Spironema fragrans, B. R. 1840-

Stackhousia monogyna, B. R. 1917 Statice arborea, B. R. 1839-6 B. M. 3776

Statice pectinata, B R. 1840-65 A caulescent species, probably halfhardy.

Stevia fascicularis, B. R. 1838-59
A pretty, sweet scented, herbaceous plant, with dense heads of white flowers.

Stylidium fasciculatum, B. M. 3816

recurvum, B. M. 3883

A genus of very neat and pretty species.

Tecoma jasminoides, P. M. 6-199 B. R. 2002

A beautiful climbing plant, long introduced to our collections.

Telopea speciosissima, P. M. 5-73 Thysanotus proliferus, P. M. 7-29; B. R. 1838-8

tenuis, B. R. 1838 50 intricatus, B. R. 1840-4 Very elegant Australian plants, of

delicate habits
Tropæolum Jarrattii, P. M. 5-29

brachyceras, B. R. 1926; B. M. 3851

tricolor, B. R. 1935

Very handsome climbers.
Tritonia fucata, B. R. 1838-35
A remarkable Iridaceous plant.

Triptilion spinosum, B R. 1841-22

A beautiful little Syngenesious plant, with dense corymbs of bright blue flowers.

Tourrettia lappacea, B. M. 3749
A singular climbing annual plant.

Tulbaghia violacea, B. M. 3555 Ludwigiana, B. M. 3547

Witsenia corymbosa, P. M. 3-269 maura, P. M. 8-221

Singular Liliaceous plants.

Xanthosia rotundifolia, B. M. 3582

A curious Umbelliferous plant. Yucca aloifolia, P. M. 3-25

Zichya pannosa, P. M. 8-147 tricolor, B. R. 1839-52

Handsome climbers; separated from Kennedya.

ORCHIDACEOUS PLANTS.

Acropera Loddigesii, B. M. 3563 A very elegant species. Ærides quinquevalvera, P. M. 8-241 A heautiful species. Anæctochilus setaceus, B.R. 2010 A curious little plant, resembling Goodyera. Angræcum gladiifolium, B. R. 1840-68 caudatum, B. R. 1844 Not very showy species. bilobum, B.R 1841-35 A very pretty plant, with drooping spikes of fragrant flowers. Aganisia pulchella, B. R. 1840-32 A very pretty species. Aporum anceps, B. M. 3608 Curious, not at all showy. Aspasia variegata, B. M. 3679 Fragrant. Batemannia Colleyii, B.M. 3818 Pretty, yields a disagreeable smell. Bifrenaria aurantiaca, B. R. 1875 Bletia patula, B. M. 3518 Parkinsoni, B. M. 3736 The former a showy species. Bolbophyllum bracteolatum, B. R. 1838-57 cocoinum, B. R. 1964 saltatorium, В. R. 1970 barbigerum, В. R. 1942 Simple inelegant plants. Brassavola glauca, B. R. 1840-44 venosa, B R. 1840-39 Martiana, B.R. 1839-5 Very pretty species. cordata, B. R. 1914; B. M. 3782 cuspidata, B. M. 3722 Perrinii, B. M. 3761 Species of little beauty. Brassia Lawrenceana, B. R. 1841-

Very sweet scented.

maculata, P. M. 6-5

Brassia Lanceana, B. M. 3577 v. viridiflora, B. M. 3794 Very handsome plants, the two last deliciously fragrant. Broughtonia coccinea, B.M. 3536 A very handsome plant. Burlingtonia candida, B. R. 1927 maculata, B.R. 1839-44 rigida, P. M. 8-193 Beautiful, sweet scented plants. Calanthe discolor, B. R. 1840-55 Very pretty. Camarotis purpurea, P. M. 7-25 A beautiful plant, with the aspect of a Saccolabium. Catesetum atratum, B. R. 1838-63 trulla, B. R. 1841-34 cornutum, B. R. 1841.5 callosum, B. R. 1841-5 lanciferum, B.R.1841-5 laminatum v.eburneum, B. R. 1841.5 barbatum v. proboscideum, B. R. 1841-5 Russelianum, B. M. 3777 luridum, B. M. 3590 (syn.) C. abruptum, B. R. 1842, misc. 24 integerrimum, B. M. 3823; (syn.) maculatum, B. R. 1840-62 Singular and grotesque looking plants. Chysis aurea, B. R. 1937 bractescens, B.R. 1841-23 Very showy species. Cartleya Aclandiæ, B.R. 1840-48 A very handsome dwarf species. labiata, B. R. 1859 v. atropurpurea, P. M. 7 - 73intermedia v. angustifolia, B. M. 3711; (syn.) Perrinii, B. R. 1838-2 intermedia, v. pallida, B. R. 1919

Cattleya Mossiæ, B. M. 3669; Cymbidium pendulum. B. R. B. R. 1840-58 1840-25 Harrisoniæ, P. M. 4-247 Showy. pubescens, R. В, crispa, B. M. 3910; P. 1841-38 M. 5-5 Small, not very showy. guttata var. Russelliana, ensifolium, var. es-B. M. 3693 triatum, B. R. 1976 pumila, B. M. 3656 Cyrtochilum mystacinum, B. R. citrina, B. M. 3742 1839-62 These are among the most beautiful Small yellow flowers. of Orchidaceous plants. maculatum, B. M. 3880 Cirrhæa tristis, B. R. 1889 var. ecornutum, B. M. Deliciously scented. fusco-lutea, B. M. 3726 3836 obtusata, B. R. 2005 Very pretty plants. filipes, B. R. 1841-59 Curious plants. Cirrhopetalum Thouarsii, B. R. A very fine species. Cynorchis fastigiata, B. R. 1998 1838-11 A terrestrial species, not very showy. Curious and pretty. Cyrtopodium punctatum, B. M. Cœlogyne Wallichiana, B. R. 3507 1840-24; P. M. 6-25 Andersonii, B. R. A beautiful little species. Cumingii, B. R. 1841-8 1841-29 Fine showy species. Cypripedium purpuratum, B. R. cristata, B. R. 1841-57 1991 Gardneriana, P. calceolus, P. M. 3-6-73 247 Very handsome plants. flaccida, B. R. 1841-31 Dendrobium sulcatum, B. R. 1838-65 ocellata, B. M. 3767 Jenkinsii, B. Pretty species. Corycium orobanchoides, B. R. 1839-37 1838-45 aureum, var. palli-A curious terrestrial species. dum, B. R. 1839-20 R. Comparettia coccinea, B. aggregatum, B. M. 1838-68. 3643 : P. M. 6-145 A beautiful little plant. densiflorum, P. M. Coryanthes macrantha, P. M. 5-5-121 Gibsonii, P. M. 5maculata v. Parkeri, B. M. 3747 169 Singular plants, with the habit of amplum, P. M. 7-Stanhopea. 121 Crybe rosea, B. R. 1872 The above are very beautiful and A terrestrial species, of no great showy species. beauty. formosum, B. R. Cryptochilus sanguinea, B. R. 1839-64 : P. M. 6-49 1838-25 moschatum, B. M. Curious. 3837 Cycnoches Loddigesii var. leumoniliforma, P. M. cochilum, B. M. 3855 3-77 Fragrant. Paxtoni, P. M. 6-Cymbidium triste, B. M. 3648 169 A small inconspicuous plant.

Dendrobium P. M. 6-2	n Cambridgeanum, 265	Epidendrum Schomburgkii, B. R. 1838-53
	nobile, P. M. 7-7	vitellinum, B. R.
		1840-35
w 100	Devonianum, P.M.	
7-169	_	macrocheilum, B. M.
	macrophyllum, P.	3534
M. 8-97		cepiforme, B. M.
These are some of the most splendid		3765
of Orchidaceous plants. undulatum, B. R.		Parkinsonii, B. M.
		3778 (syn. E. falcatum) B. R.
	sc. 6, (syn.) D. dis-	misc. 1840-20
color, B.	R. 1841-52	Grahami, B. M.
	macrostachyum, B.	3885
R. 1865	•	
	crumenatum, B. R.	densiflorum, B. M.
1000 00	Crumchattin, D. 10	3791
1839-22		calocheilum, B. M.
	tiful, though interesting	3898
species.		glumaceum, B. R.
Dipodium punctatum, B. R. 1980		1840-6
A curious, leafless, terrestrial species.		
Epidendrum armeniacum, B. R.		bicornutum, P. M.
1867	, 21 200	5-245
	alamatum D D 1920	Handsome, and showy species.
	clavatum, B. R. 1870	Eria ferruginea, B. R. 1839-35
	ochraceum, B. R.	convallarioides, B. R. 1841-
1838-26		62
	diffusum, B. M. 3565	
	viridi-purpureum, B.	armeniacea, B. R. 1841-42
M. 3666	reim purpureim, 20	Uninteresting species.
2120 0000	ablamalan D M	stellata, B. M. 3605
0555	chloroleucum, B. M.	A pretty plant.
3557		Eulophia macrostachya, B. R.
	patens, B. M. 3800	1972
Small inconspicuous species.		A handsome species, of easy cultiva-
	bifidum, B. R. 1879	tion.
	æmulum, B.R. 1898	Gongora fulva, B. R. 1839-51
6.11 T	nocturnum, var. lati-	Bufonia, B. R. 1841-2
folium, B. R. 1961		maculata, B. M. 3687
	tesselatum, B. R.	Very showy and free flowering plants.
3638		Galeandra Baueri, B. R. 1840-49
	crassifolium, B. M.	Devoniana, P. M. 8-
3543	, 2, 2,2	145
	comic comm. D. M.	Handsome species.
3595	coriaceum, B. M.	
9999		Govenia Gardneri, B. M. 3660
	floribundum, B. M.	liliacea, B. R. 1838-13
3637		Plants of little beauty.
	papillosum, B. M.	Grammatophyllum multiflorum,
3631	, ,, 2. M.	P. M. 6-217; B. R. 1839-65
	variagetum D D	
1990 11	variegatum, B. R.	A noble plant, of free habits.
1839-11		Habenaria procera, B. R. 1858
Species, with interesting and pretty		Curious.
flowers.		Houlletia vittata, B. R. 1841-69
	Skinneri, B. R. 1881	A showy plant.

Miltonia Russeliana, P. M. 7-

Monachanthus fimbriatus, B. M.

discolor viridiflo-

217

3708

Splendid plants.

Huntleya Meleagris, B. R. 1839-

Splendid plants.

Jonopsis tenera, B. R. 1904

An elegant little plant.

violacea, P. M. 8-1

rus, B. M. 3601 Lælia furfuracea, B. R. 1839-26; Bushnani, B. M. B. M. 3810 3832 autumnalis, B. R. 1839roseo-albus, B.M. 27; B. M. 3817; P. M. 6-121 3796 albida, B. R. 1839-54 longifolius, B.M. rubescens, B. R. 1840-41 3819 acuminata, B. R. 1841-24 A genus of highly curious plants. anceps, B. M. 3804 P. M. Mormodes pardina, B. M. 3900 4-73 var. unicolor, B.M. 3879 var. Barkeriana, B. R. 1947 atropurpurea, B. R. cinnabarina, P. M. 7-193 1861 A genus of truly beautiful plants. Curious and handsome plants. Leptotes bicolor, var. glauco-Myanthus deltoideus, B. R. 1896 phyllus, B. M. 3734 spinosus, B. M. 3802 A delicate plant. barbatus labello albus. Liparis Walkeriæ, B. M. 3770 B. M. 3514 A very simple looking plant. Grotesque looking species. Lissochilus speciosus, P. M. 4-25 Oncidium papilio, P. M. 5-175 A handsome terrestrial species. var. limbatum, B. M. 3733 Maxillaria Rollisonii, B. R. 1838-B. R. Lanceanum, 40 1887; P. M. 4-169 rufescens, B. R. 1848 crispum, B. R. 1920; tenuifolia, B.R.1839-8 B. M. 3499 cuculata, B. R. 1840var. luridum, B. M. 3603 12 guttatum, B. R. 1839pumila, B. M. 3613 16 Henchmanni, B. M. pulvinatum, B.R. 1839-3614 42 Small inelegant species. ornithorrhynchum, B. Steelii, B. M. 3573; M. 3912; B. R. 1840-10 B. R. 1986 altissimum, B.R. 1851 vitellina, B. R. 1839divaricatum, P.M. 3-4 12 leucochilum, P. M. 7stapeloides, B. Μ. 241 3877; B. R. 1839-17 Forbesii, B. M. 3705 B. M. aureo-fulva. pachyphyllum, B. M. 3629 3807 Pretty species. Wrayæ, B. M, 3854 Megaclinium maximum, B. R. concolor, B. M. 3752 1959 Insleavii, P. M. 8-265 Curious. Of this extensive and beautiful genus, Miltonia spectabilis, B. R. 1992; the above are very handsome and P. M. 7-97 showy species. candida, P. M. 6-241 Cebolleta, B. R. 1994; var. flavescens, B.M. 3793 B. M. 3568

Pleurothallis saurocephala, B. R. Oncidium cornigerum, B. M. 3486 detoideum, B. R. 2006 stramineum, B. R. 1840-14 lunatum, B. R. 1929 trullifremu, B.R.1839-57 citrinum, P. M. 4-77 pumilum, B. M. 3581 Hunteanum, B. M. 3806 В. M. monoceras, 3890 Species of very pretty and elegant appearance. macrantherum, B. M. 3845 raniferum, B.R. 1838-48 var. major, B. M. 3712 Minute flowered, but pretty. iridifolium, B.R. 1911 Very dwarf, with large flowers. Rossii, B. Odontoglossum 1839-48 maculatum, B. R. 1840-30 Bictonense, B. R. 1840-66 (syn. Zygopetalum africanum, B. M. 3812) pulchellum, B. R. 1841-48 grande, P. M. 8-49 Beautiful plants; O. grande has a noble appearance. Paxtonia rosea, B. R. 1838-60 Elegant. Peristeria cerina, B. R. 1953 pendula, B. M. 3479 Curious plants. Phaius albus, P. M. 5-125; B. R. 1838-33 A delicate flowered and lovely plant. Wallichii, P.M. 6-193 A vigorous growing and showy plant. Phalænopsis amabilis, B. R. 1838-34; P. M. 7-49 The Indian Butterfly plant; a truly beautiful species. Pleurothallis Grobyi, B.M. 3682 picta, B. M. 3897

Small inelegant plants. Polystachia grandiflora, B. M. 3707 A singlar plant, of little beauty. Prescottia colorans, B. R. 1916 A terrestrial species, with a long spike of inconspicuous green Renanthera coccinea, P. M. 4-49 A splendid plant. Rodriguesia secunda, B.M. 3524 Small showy rose colored flowers. planifolia, B. M. 3504 A fragrant species, with lemoncoloured flowers. Barkeri, B. M. 3497 Green flowers. crispa, B.R. 1840-54 A delicious scented green flowered species. Saccolabium denticulatum. P. M. 7-145 calceolare, P. M. 6-97 Interesting little plants. Sarcanthus teretifolius, B. M. A singular looking species. Satyrium pstulatum, B. R. 1840-A pretty terrestrial species. Sobralia sessilis, B. R. 1841-17 A terrestrial species, with solitary terminal flowers. Sophronitis grandiflora, B. M. 3709 cernua, B. M. 3677 Lovely little plants. Schomburgkia marginata, B. M. 3729 A noble plant. Spiranthes bracteosa, B. R. 1934 An inelegant plant. Scaphyglottis violacea, B. R. 1901 An inconspicuous species. Stanhopea tigrina, B. R. 1839-1 quadricornis, B. R. 1838-5 Noble species.

Stenia pallida, B. R. 1838-20 Pretty.

Trichopilia tortilis, B. R. 1863; B. M. 3739

A very beautiful little plant.

Trichocentrum fuscum, B.M. 1951

Trigonidium obtusum, B.R. 1923 Curious.

Vanda teres, P. M. 5-193

tessellata, P. M. 7-265

Vanda (syn. b. Roxburghii.) Most beautiful species.

Zygopetalum cochleare, B. R. 1859

Mackavi, P. M.

3-97

Maxillare, P. M.

4-271; B. M. 3686

Murrayanum, B.

M. 3674 Handsome species.

LIST OF HALF HARDY PLANTS,

SUITABLE FOR PLANTING OUT IN

Æonium cruentum, B. R. 1841- | Cosmus scabiosoides, B. R. 1838-61

Thrives in a warm situation in summer.

Amphicome arguta, P. M. 6-79; B. R. 1838-19

A truly beautiful and elegant species. Armeria fasciculata, B. R. 1841-21

A fine suffruticose species.

Asagræa officinalis, B.R. 1839-33 A Melanthaceous plant, requiring the treatment of Tigridia.

Bessera elegans, B. R. 1839-34 An elegant small Liliaceous plant.

Bomarea simplex, B. M. 3863 acutifolia, var. punctata, B. M. 3871

Very showy species.

Bouvardia triphylla, var. splendens, B. R. 1840-37

angustifolia, P. M. 7-

Splendid plants for the flower garden, thriving in turfy peat. Calceolaria corymbosa, var. Talisman, P. M. 3-27

Calandrinia discolor, B.R. 1839-4 A well known and beautiful biennial plant.

Capsicum ustulatum, P. M.5-197 The true Chili pepper.

Calliprora lutea, B. M. 3588 A pretty Asphodelaceous plant.

Cobæa stipularis, B. R. 1841-25 macrostema, B. M. 3780 Species with dull yellow flowers, and the habit of C. scandens.

15

A pretty tuberous rooted plant, of dwarf habit, resembling a Dahlia Craspedia glauca, B. R. 1908

A curious Syngenesious plant, from Van Dieman's Land, with globular heads of yellow flowers.

Dianthus Bisignani, B. R. 1838-

A beautiful sub shrubby species of pink.

Diplacus puniceus, B. M. 3655; P. M. 6-221

A beautiful and free flowering small shrub.

Erythrina crista-galli, P. M. 3-175Flowers splendidly, if planted in a

sheltered situation. Francoa ramosa, B. M. 3824

A pretty perennial, nearly hardy. Fuchsia fulgens, B. M. 3801;

B R. 1838-1 discolor, B. M. 3498

globosa elegans, P. M. 4-75

Standishii, B. R. 1840-2 cylindracea, B. R. 1838-

66 radicans, B. R. 1841-66 cordifolia, B. R. 1841-70 corymbiflora, B.R. 1840-

70: P. M. 8-7

Gaillardia bicolor, var. Drummondii integerrima, B. M. 3551; (svn.) G. pieta

Gardognia betonicoides, B. M. 3860 multiflora, В. M. 3772; P. M. 6-223 Pretty free flowering plants. Gelasine azurea, B. M. 3779 A pretty Iridaceous plant. Gonolobus hispidus, B. M. 3786 A singular half climbing Asclepiadaceous plant. Gladiolus insignis, P. M. 7-223 ramosus, P. M. 6-99 Mortonius, B. M. 3680 Very superb plants for the flower garden in summer. gracilifolius, var. Habranthus Boothianus, B. R. 1967 A very pretty little species. Helichrysum niveum, P. M. 8-99: B. M. 3857 A beautiful herbaceous species; succeeding best if treated as a biennial. Herbertia pulchella, B. M. 3862 cærulea, B. M. 3862 Pretty little Iridaceous plants. Hibiscus lilacinus, B. R. 2009 A blue flowered species, from the Swan River, Kreysigia multiflora, B. M. 3905 An elegant herbaceous plant Lapeyrousia anceps, B. R. 1903 A pretty Iridaceous plant. Lilium speciosum, P. M. 5-1; B. R. 2000 var. albiflorum, B. M. 3785; P. M. 8-127

lancifolium roseum, P.M. 5 - 267aurantiacum, P. M. 6-127 Thunbergianum, B. R. 1839-38 Splendid frame plants; from Japan. Linum monogynum, B. M. 3574 Nearly hardy. Loasa lateritia, B. M. 3632; P. M. 5-77; B. R. 1838-22 A very showy climber. Lobelia heterophylla, B.R. 2014;

B. M. 3784; P. M. 6-197

A fine biennial.

fenestralis, B. R. 1838-47

Lophospermum scandens, B. M. 3650 erubescens, var. spectabile, P. M. 8-75 Handsome climbers. Lupinus arboreus, B. R. 1838-32 A nearly hardy shrubby species, with yellow flowers. Malva Creeana, P. M. 6-55; B. M. 3698 Munroana, P. M. 4 269 purpurata, B. M. 3814 Very pretty border plants. Matthiola odoratissima, B. R. 1839-25 A very sweet, but dull coloured evening Stock. Merendera caucasica, B. M. 3690 A pretty little plant, related to Colchicum: Mimulus cardinalus, B.M. 3560; P. M. 3-197 Harrisonæ, P. M. 4-173; (syn.) M. roseus superba Handsome border plants, nearly hardy. Ornithogalum chloroleucum, B. R. 1853 Not showy. Oxalis lasiandra, B. M. 3896 A very showy species. Petunia intermedia, B. R. 1931 A delicate growing, very handsome plant. violacea vars, B.M. 3556 Primula venusta, B. R. 1983 Nearly related to P. auricula. Puva cærulea, B. R. 1840-11 A singular Bromeliaceous plant, nearly hardy. Roscoea purpurea, B. R. 1840-A fine Scitamineous plant. Rigidella flammea, B. R. 1840-16; P. M. 7-247 immaculata, B. R. 1841-Bulbs, allied to Tigridia Salvia linarioides, P. M. 7-77 patens, P. M. 6-1; B. M. A most lovely little plant, when 3808 B. R. 1839-23 cultivated either in the greenhouse Regla, B. R. 1841-14

tubifera, B. R. 1841-44

Handsome species.

Senecio cruentus, B. R. 1839-7; (syn.) Cineraria cruenta populifolius, var. lacteus, B. R. 1839-45 Well known plants.

Sisyrinchium speciosum, B. M. 3544

grandiflorum, B. M.

3509

graminifolium, var. pumilum, B. R. 1915 Very pretty Iridaceous plants. Janum uncinellum B. R. 1840-

Solanum uncinellum, B. R. 1840-15

A pretty decumbent species. Statice monopetala, B. R. 1841-

pectinata, B. R. 1840-65 Pretty sub-shrubby species.

puberula, B. M. 3701
A very handsome dwarf kind.

Stenomesson latifolium, B. M. 3803

An interesting Amaryllidaceous plant.

Stevia trachelioides, B. M. 3856
A pretty Syngeneseous plant, with
dense corymbs of rich purple
flowers.

Triteleia uniflora, B. R. 1921 A pretty Liliaceous plant.

Thunbergia alata alba, B.M. 3512 aurantiaca, P. M. 6-269 Splendid climbers.

Tradescantia iridescens, B. R. 1840-34

tumida, B. R. 1840-

42 Pretty species.

Tritonia fucata, B. R. 1838-35 A handsome Iridaceous plant.

Tropæolum tuberosum, B. M. 3714; P. M. 5-49

Should be plunged in a pot into the flower garden, in order to produce its flowers.

Moritzianum, B. M.

3844; P. M.8-199 A beautiful species.

Verbena Tweedicana, B. M. 3541 incisa, B. M. 3628 teucrioides, B. M. 3694 amœna, P. M. 7-3 Aubletia, var. Drummondii, B. R. 1925

Xerotes longifolia, B. R. 1839-3 A singular Juncaceous plant, of no beauty.

ANNUALS.

Anchusa versicolor, B. M. 3477
A very pretty species.

Antirrhinum glaudulosum, B. R.
1893

A curious plant, not without beauty. Balsamina Mastersiana, P. M. 6-75

A single Balsam, from the Khoseea Hills of India; pretty.

Bartonia aurea, B.M. 3649, B. R. 1831

A very showy plant.

Brachycome iberidifolia, B. M. 3876, B.R. 1841-9

A beautiful half hardy species.

Blumenbachia multifida, B. M. 3599

A pretty Loasaceous plant.

Burrielia gracilis, B. M. 3758

A showy plant, allied to Lasthenia.

Callichroa platyglossa, B.M. 3719

A pretty yellow flowered Syngeneseious plant. Calliopsis tinctoria, var. atrosanguinea, B. M. 3511 Very showy.

Centaurea Quicra, B. R. 1840-28 depressa, B. M. 3662 Very showy and beautiful species.

Chenopodium quinoa, B. M. 3641

Much used as an article of food by
the natives, in the temperate
regions of South America.

Chryseis compacta, B. R. 1948
A dwarf species of the genus well
known as Eschscholtzia.

Clarkia elegans, B. M. 3592 rhomboidea, B. R. 1981 (syn.) C. gauroides

Cleome lutea, B. R. 1841-67
A rather pretty plant, thriving on

strong soil.
Clintonia pulchella, B. R. 1909
A beautiful little plant.

Collinsia bicolor, B. M. 3488

Collinsia heterophylla, B. м. 3695

A very showy species.

Collomia Cavanillesii, B.M. 3468 (syn.) C. coccinea

A pretty hardy species.

flowers.

Coreopsis longipes, B. M. 3586 filifolia, B. M. 3505 Pretty species, with whole coloured

> diversifolia, B. M.3474 coronata, B. M. 3460

Very pretty species, with a deep stain around the disk.

Cosmus tenuifolius, B. R 2007 A beautiful Syngeneseous plant, of delicate habits.

Dracopis amplexicaulis, B. M. 3716; (syn.) Rudbeckia amplexicaulis

Erysimum Perofskianum, B. M. 3757: P. M. 6-245 A very showy Cruciferous plant.

Eschscholtzia crocea, B. M. 3495 (syn.) Chryseis crocea

Eucharidium concinnum, B. R. 1962; B. M. 3589

A pretty species, related to Clarkia Eutoca viscosa, B. M. 3572 Menziesii, B. M. 3762

Wrangeliana, P.M.5-199 divaricata, B. M. 3706 Pretty plants

Gentiana quinqueflora, B. M. 3496

A pretty species.

Gilia tricolor, B. M. 3463 tenuiflora, B. R. 1888 The latter a delicate species, with pretty pink flowers.

Godetia lepida, B. R. 1849 vinosa, B. R. 1880 rubicunda, B. R. 1856 Hardy species, altered from Œnothera.

Helichrysum macranthum, B. R. 1838-58; P. M. 5-247 A beautiful species, with white flowers, tipped with rose.

Hologymne glabrata, B. M. 3730 Cultivated as Lasthenia glabrata. Hymenoxys californica, B. M.

A simple Syngeneseous plant.

Impatiens tricornis, B. R. 1840-9 macrochila. В. R. 1840-8

glanduligera, B. 1840-22

candida, B. R. 1841-

20 rosea, B. R. 1841-27

Very handsome plants from India. Kaulfussia amelloides, P. M. 8-195

A dwarf, pretty blue species, resembling Brachycome.

Leptosiphon androsaceus, B. M. 3491

densiflorus, P. M.

3 - 220Beautiful little plants.

Limnanthes Douglasii, B. M. 3554

A neat looking plant; quite hardy. Linaria Canadensis, B. M. 3473 A small species, with large flowers.

Linum Berendieri, B. M. 3480 A beautiful yellow flowered species. Lobelia erinoides, B. M. 3609

A very diminutive plant. Lopezia lineata, B. R. 1840-40

An elegant plant. Lupinus Hartwegii, B. R. 1839-

A beautiful species.

Madia elegans, B. M. 3548 A large showy Syngenesious plant.

Morna nitida, B. R. 1941 nivea, B. R. 1838-9

Beautiful species of " Everlasting." Nemesia floribunda, B. R. 1838-

A delicate Scrophulariaceous plant. Nemophila insignis, B. M. 3485

atomaria, B.M.3774; B. R. 1940

Enothera bifrons, B. M. 3764 A showy yellow flowered plant.

Oxyura chrysanthemoides, B. R. 1850

Papaver Gariepinum, B. M. 3623 A small dingy flowered species. Phacelia vinifolia, P. M. 3-121

tanacetifolia, B. M. 3703 Pretty free growing plants.

Physostegia truncata, B. M. 3494 A pretty Labiaceous plant.

Platystemon californicum, B. M. 3579

leiocarpum, B. M.

3750

Little delicate plants; very pretty. Platystigma linearis, B. M. 3575; B. R. 1954

A very pretty little species.

Phlox Drummondii, B. R. 1949 A lovely plant.

Rhodanthe Manglesii, B. M. 3483; P. M. 3-173

A beautifully delicate plant. Senecio ampullaceus, B. M. 3487

A coarse looking plant.

Schyzanthus Evansianus, P. M. 8-171

A very handsome kind.

Sphenogyne speciosa, P. M. 6-

A very showy species.

Streptanthus hyacinthoides, B. M. 3516

An inelegant Cruciferous plant. Trichinium alopecuroideum, B.

R. 1839-28 An interesting plant.

Tagetes corymbosa, B. M. 3830 A small single flowered Marygold. Trifolium fucatum, B. R. 1883 An annual species of clover.

Vesicaria gracilis, B. M. 3533 grandiflora, B. M. 3464 Showy Cruciferous plants.

HARDY HERBACEOUS PLANTS.

Aconitum chinense, B. M. 3852; P. M. 5-3 A showy species.

Allium Cowani, B. M. 3531 cæruleum, B. R. 1840-51 Very pretty plants

Anchusa petiolata, B. M. 3858 A neat flowering species.

Aquilegia glauca, B. R. 1840-46 A fine plant. Campanula Portenschlagiana, B.

R. 1995

A neat little species.

Chelone obliqua, P. M. 7-149 Lyonii, P. M. 7-269 Beautiful, old neglected plants.

Chrysostemma tripteris, B. M. 3583

(syn.) Coreopsis tripteris A showy old plant.

Clematis lathyrifolia, B. R. 1839-

A showy plant.

Convallaria oppositifolia, B. M. 3529

Coreopsis senifolia, B. M. 3484 Showy.

Crocus speciosus, vars B. M. 3861; B. R. 1839-40

A very showy autumn species. Imperati, B. R. 1993 pusillus, B. R. 1987

Crocus suaveolens, B M.3864 annulatus Adamicus, B. M. 3868

lagenæflorus var. lacteus lutescens, B. M. 3869

Crucianella stylosa, B. R. 1838-55

A beautiful little plant for bedding. Cyclamen Neapolitanum, B. R. 1838-49

The autumn Cyclamen. Cynoglossum cælestinum, B. R. 1839-36

longiflorum, B. R. 1840-50

glochidiatum, B. R. 1841-15

Pretty plants; the latter a biennial. Dahlia glabrata, B. M. 3878; B. R. 1840-29

A pretty dwarf species.

Delphinium Barlowi, B.R. 1944; P. M. 5-265

sinensis plena, P. M. 7-171

Beautiful plants with double flowers intermedium, B. R.

1963 var. cærulescens, B. R.

1984 var. pallidum, B.R. 1969

Delphinium (i.) palmatifidum, B. R. 1838-38 (i.) sappharinum, B.R. 1838-52 laxiflorum, B. R. 1838-30 decorum, B.R. 1840-64 montanum, B. R. 1936 vimeneum, B. M. 3593 azureum, B.R. 1999 Very showy plants. Desmodium canadense, B. M. 3553 Known also as Hedysarum canadense Dianthus ferrugineus, B. M. 1839-15 A pretty species, with delicate yellow Dodecatheon integrifolium, B.M. 3622 A very pretty species. Douglasia nivalis, B. R. 1886 A neat little Primulaceous plant: Echinacea Dicksoni, B. R. 1838-27 A pretty Mexican Syngeneseous plant. Epimedium Musschianum, B.M. 3745 macranthum, P. M. 5-151; B. R. 1906 violaceum, P. M. 5-123; B. R. 1840-43; B. M. 3751 Very pretty little species. Euphorbia veneta, B. R. 1838-6 A trailing evergreen half-shrubby species, well adapted for rockwork rigida, B. R. 1838-43 A pretty species, suitable for warm dry rockwork. Funkia Sieboldi, B. R. 1839-50; B. M. 3663 albo-marginato, B.M.3657 (syn.) Hemerocallis Sieboldii, P. M. 5-25 Pretty Day-lilies. Gaura parviflora, B. M. 3506 A little biennial of no beauty. Gentiana gelida, P.M. 7-5

flowers. Geranium cristatum, B. M. 3732 tuberosum, v. ramosum, B. R. 1839-10 rubifolium, B.R.1840-Neat flowering species. Grindelia inulioides, B. M. 3737 A rather large Syngeneseous plant with yellow flowers. Helianthus decapetalus, B. M. 3510 mollis, B. M. 3689 Larger growing plants than the preceding. Helleborus lividus, B.R. 1838-54 A rare plant; flowers green. Heuchera cylindracea, B.R. 1924 An inelegant plant. Horkelia fusca, B. R. 1997 A singular Rosaceous plant. Hosackia stolonifera, B.R. 1977 Adapted for shrubbery borders, Hoteia barbata, B. M. 3821 (syn.) Spiræa barbata Hyacinthus spicatus, B. R. 1869 A rare and diminutive plant. Iris alata, B. R. 1876 fragrans, B. R. 1840-1 Handsome species. Jaborosa integrifolia, B. M. 3489 A singular creeping stemmed Solanaceous plant. Liatris propinga, B. M. 3829 horealis, P. M. 5-27 Handsome species. Lobelia polyphylla, B. M. 3550 siphilitica, hybrida, B.M. 3604; (syn.) L. speciosa, L. Millerii ignea, P. M. 6-247 Very showy plants. Lupinus versicolor, B.R. 1979 A pretty decumbent species. latifolius, B. R. 1891 Allied to L. rivularis. Barkeri, B. R. 1839-56 leptocarpus, B.R. 1840-38 subcarnosus, B.M. 3467

Gentiana septemfida, P. M. 8-51

Splendid plants, with lovely blue

Lupinus Texensis, B. M. 3492 Pretty biennial species. Lychnis Bungeana, P. M. 4-7; B. R. 1864; P. M. 3594 A very showy plant. Macropodium nivale, B.M. 3805 A rare, but not showy Cruciferous Malva lateritia, B. M. 3846 Pretty. Marshallia cæspitosa, B.M. 3704 An interesting Syngeneseous plant. Monarda aristata, B. M. 3526 Not very showy. Monolopia major, B. M. 3839 A coarse Syngeneseous plant. Morina longifolia, B.R. 1840-36 A pretty Dipsaceous plant, something like Acanthus. Nectaroscordum siculum, B.R. 1913 (syn. Allium siculum) Nuttalia cordata, B.R. 1938 grandiflora, P. M. 5. 217 papaver, P. M. 6-173 malvæflora, P. M. 7-31 A handsome genus, requiring to be permanently planted out in a dry sheltered situation. Ornithogalum latifolium, B. R. 1978 montanum, B. R. 1838-28 Quite hardy. Enothera fruticosa, var. Indica, B. R. 1841-11 A handsome variety. var. ambigua, B. M. 3545; (syn.) O. serotina, O. Fraseri, &c. Pæonia Brownii, B. R. 1839-30 A curious and rare plant. Pascalia glauca, P. M. 8-125 A large Syngeneseous plant, resembling the annual sunflower. Pentstemon heterophyllus, B. R. 1899; B. M. 3853 breviflorus, В. 1946 crassifolius, B. R. 1838-16

campanulatus, B. M.

3884

Pentstemon glandulosus, B. M. 3688 diffusus, B. M. 3645 argutus, P.M. 6-271 gentianoides, P. M. 4-265; B. R. 1838-3 Cobæa, P. M. 4-243; B. M. 3465 Murrayanus, P. M. 3-265; B. M. 3472 speciosus, P.M. 6-171 Of this beautiful family, the whole of its members are worthy of cul-P. speciosus, with its tivation. soft blue flowers, is one of the best. Phlox Coldryana, P. M. 7-197 A very beautiful kind. Physostegia imbricata. P. M. 5 - 173Allied to Dracocephalum. Potentilla glandulosa, var. incisa, B. R. 1973 Small yellow flowers. atrosanguinea, var. Russelliana, B. M. 3470 Hopwoodiana, P. M. 6 - 149ferruginea, P. M. 5-223 insignis, B. R. 1841-37 Beautiful showy species. Psoralea orbicularis, B. R. 1971 A pretty plant, with creeping stems. Polygonum amplexicaule, B. R. 1839-46 A pretty and graceful plant, adapted for planting on the margin of lakes, &c. Rheum Emodi, B. M. 3508 The true officinal Rhubarb of com-Rudbeckia Drummondii, P. M. 6-51 A showy plant. Salvia canescens, B. R. 1838-36 confertiflora, B. R. 1839-29; B. M. 3899 hians, B. R. 1841-39 Very handsome species. Scilla Cupaniana, B. R. 1878 pratensis, B. R. 1839-63 Very pretty and rare species.

Silphium terebinthaceum, B. M. 3525

A handsome large growing Syngeneseous plant, with yellow flowers.

Spiræa Kamtchatica, var. himalensis, B. R. 1841-4

barbata, B. R. 2011
The handsomest of the herbaceous

Spiræas. Stenactis speciosa, B. M. 3606

A handsome plant, with the appearance of a large flowered perennial

Sternbergia colchiciflora, B. R. 2008

A pretty little autumn flowering bulb. Telekia speciosa, B. M. 3466 A stately Syngeneseous plant adapted for shrubbery borders.

Tithonia ovata, B. M. 3901

Adapted to the same situations as the last.

Tofieldia pubens, B. M. 3859
A weedy looking Melanthaceous

Thermopsis fabacea, B.M. 3611
A handsome Leguminaceous plant.

Tradescantia virginica alba, B.M.
3501

caricifolia, B. M.

3546 Pretty species. Trifolium reflexum, B.M. 3471
A handsome species.

hybridum, B. M. 3702 Inelegant.

Troximon glaucum, B.M. 3462

A showy Syngeneseous plant.
Tulipa tricolor, B. M. 3887

scabriscapa, B.R. 1990 maleolens, B. R. 1839-66 Interesting bulbs.

Gesneriana, B.R. 1838-46
The parent of the race of garden
Tulips.

Veronica labiata, B.M. 3461

prostrata var. satureiæfolia, B. M. 3683

perfoliata, B. R. 1930 Very showy plants.

Verbascum tauricum, B.M. 3799
A very handsome Mullein.

Yucca Dragonis, B. R. 1894 flaccida, B. R. 1895

Plants extremely well adapted for planting on prominent banks, pieces of rock, or other romantic sites.

Zigadenus glaucus, B.R. 1838-67 An interesting Melanthaceous plant.

HARDY TREES AND SHRUBS.

Æsculus Ohiotensis, B. R. 1838-51

A rapid growing tree.

Amygdalus incanus, B. R. 1839-

(syn. A. nana, v. incana)
A pretty shrub.

Arbutus laurifolia, B. R. 1839-67 A very elegant species.

Arctostaphylos nitida, B.M. 3904 (syn. A. discolor, B. M.

A most beautiful shrub from the frigid regions of Mexico, and said to be hardy.

Azalea Seymouri, B. R. 1975

A pretty garden variety.

Berberis empetrifolia, B. R. 1840-27 ·

A pretty trailing shrub.

Berberis coriaria, B. R. 1841-

A robust shrub.

Ceanothus pallidus, B.R. 1840-20

A beautiful shrub, resembling C. azureus, and well adapted for training against a wall.

Clematis cærulea, B. R. 1955; P. M. 4-193

florida, var. bicolor, B. R. 1838-25

(syn. C. Sieboldii, P.M. 4-147)
Splendid climbers, either for the greenhouse or open air.

montana, B. R. 1840-53
A rapid growing ornamental species.
Clethra tomentosa, B. M. 3743
A rather straggling shrub.

Colletia horrida, B. M. 3644

A singular dwarf tufted bush.

Cotoneaster laxiflora, B. M. 3519 An upright growing shrub, with insignificant flowers.

Cratægus microcarpa, B. R. 1846 orientalis, B. R. 1852 Crus-galli, v. ovalifolia,

B. R. 1860 prunifolia, B. R. 1868 odoratissima, B.R. 1885 glandulosa, var. macran-

tha, B. R. 1912 coccinea, B. R. 1957 heterophylla, В.

1847

maroccana, B. R. 1855 The above have red fruit.

platyphylla, B.R. 1874 oxaycantha, v. Oliveriana, B. R. 1933

Purple fruited kinds.

tenacetifolia, B. R. 1884 Aronia, B. R. 1897 Mexicana, B. R. 1910

These have yellow fruit; the latter is evergreen in mild climates.

> flava, B. R. 1939 var. lobata, B. R. 1932 spathulata, B. R. 1890

The two former have greenish fruit, and are the least ornamental in growth; the latter has deep green fruit.

pyrifolia, B. R. 1877 A species with orange coloured fruit. Cytisus æolicus, B. R. 1902 Scarcely hardy.

Laburnum, purple, B. R. 1965

A variety with dingy purplish flowers, scarcely worth cultivating. Daphne australis, B. R. 1838-56 A species allied to D, collina and

D. Neapolitana. Deutzia corymbosa, B.R. 1840-5

Hardy, distinct from D. parviflora. scabra, B. M. 3838

Beautiful little shrubs. Edwardsia, Macnabiana, B. M.

A strikingly handsome small tree.

Escallonia illinita, B. R. 1900 A not very showy species.

Kerria Japonica, B. R. 1873; (syn.) Corchorus Japonica

The single flowered state of the well known double Corchorus.

Leucothoe floribunda, P.M. 4-101 A lovely species, known as Andromedo floribunda.

Levcesteria formosa, B. R. 1839-2; B. M. 3699

A rather pretty shrub, of very free growth.

Mahonia glumacea, P. M. 7-55 dwarf free flowering species,

known as Berberis nervosa. Pernettya angustifolia, B. M.

3889; B. R. 1840-63

A pretty little hardy plant, but liable to suffer from the heat of summer; it requires the management of other delicate American shrubs.

Philadelphus laxus, B. R. 1839-39

Gordonianus, B. R. 1839-32

hirsutus, B.R. 1838-

14 speciosus, B.R. 2003

These are very ornamental species of Syringa or Mock Orange. P. hirsutus is a very small growing kind.

Potentilla glabra, B. M. 3676 A neat little shrub, with abundance of white blossoms.

Pyrus arbutifolia, B. M. 3668

A handsome free flowering bush Rhododendron caucasicum hybridum, B. M. 3811

nudiflorum, var. scintillans, B. M. 3667

Handsome varieties of the Azalea group.

albiflorum, B. M.

3670

An interesting and distinct species, with small white camupanlate drooping flowers.

campanulatum, B.

M. 3759

A superb arborescent species. chamæcistus.

M. 3-169

A delicate and pretty species, with pale flesh coloured flowers; it seldom exceeds a few inches in growth, and has the aspect of a Thymus rather than of a Rhododendron; it is extremely delicate in cultivation.

Ribes speciosum, B. M. 3530
A very handsome species, with

flowers resembling a Fuchsia. Rosa sinica, B. R. 1922

A common climbing Rose, with single

white flowers, of a rather tender constitution. centifolia muscosa cristata,

B. M. 3475

microphylla, B. M. 3490 Solanum crispum, B. M. 3795

A very pretty, free growing, quite hardy species.

Spartium acutifolium, B. R. 1974

An apparent variety of the Spanish

Broom.

Spiræa vaccinifolia, B. R. 1840-17

An elegant Nepal shrub, growing about three feet high, and producing abundant terminal corymbose panicles of white flowers; it prefers the American border.

Stranvæsia glaucescens, B.R. 1956 (syn.) Cratægus glauca

A pretty evergreen shrub, requiring the protection of a wall.

Vaccinum virgatum, B. M. 3522

A small bush, with rather pretty

Wistaria Consequana, P.M. 7-127 (syn.) W. sinensis

An admirable climbing plant, either in the conservatory or the greenhouse, on the wall, or in the open

SOME REMARKS ON THE TREATMENT OF THE GENUS APHELEXIS.

BY A: Z.

Under the generic title Aphelexis, is associated some of our most beautiful greenhouse plants. The species composing the genus, were separated from Elichrysum, by the late Professor Don, and are remarkable for the profuseness and beauty of their blossoms, when cultivated in a successful manner. The following outline of their treatment may, perhaps, be found serviceable:-The soil in which they most readily thrive, is a mixture of three parts good turfy peat, and one part sandy loam, to which a portion of silver saud may be added with advantage. In potting, they require much care, for, being naturally of a delicate habit, they are unable to sustain any degree of rudeness in the performance of this operation; it is necessary to keep the ball of earth a little elevated at each shift, and above all, not to overpot the plants, for, when in this condition, they are more than ordinarily susceptible of injury from a too liberal supply of water, and when once brought by injudicious treatment to a sickly condition, it is not found to be an easy matter to recover them. In the application of water likewise, considerable discretion is needed, for, perhaps in no one point connected with their treatment, are they so liable to suffer injury; this will render it evident that the supplies should be moderate, according to the season and state of the weather. summer, an airy situation in the greenhouse should be afforded them, where, at the same time, the force of the midday sun may be somewhat broken ere it reach them; and in winter, a similar situation, uncrowded by other plants is, perhaps, the most suitable. After their re-potting or examination in the spring, however, a slight increase of temperature during their growth is of great use to them, but this treatment must be guided by great caution in its performance.

TO VOL. VI.

	A.				7	AGE
Achimenes longiflora, Notice of						117
rosea					117,	183
Acorns, Suggestions on Planting	7					6
Æonium cruentum, Notice of	• •					160
Ærides quinquevulnera, Notice	of					186
Brookeii			• •			90
Æschynanthus maculatus, Notic	ce of			• •		12
ramosissimus						36
grandiflorus						Ш
Allamanda cathartica, Notice of						14
Alstræmeria Errembaultii, Notic	ce of					162
s, their Hardiness						166
Amaryllis Banksiana, Notice of						258
Amphicome arguta, Treatment of	of					69
Anemone rivularis, Notice of						258
Angræcum bilobum, Notice of		• •				63
Anigozanthus Manglesii, Notice	of					39
Ants, Prevention of, in pots						167
Annual Plants, Necessity of Thi	nning					256
Actus lanigera. Notice of						41
Aphelexis, Genus, Some Remark	s on					288
Apple, Summer Pruning of						10
Apricot, Summer Pruning of	• •					9
Aquilegia Skinnerii, Notice of						210
Arctostaphylos nitida, Notice of						159
pungens						233
Argyreia festiva, Notice of						114
Arrangement of Height and Cole	ours nece	ssary to p	roduce ef	Tect		68
Aspasia Epidendrioides, Notice	of					261
Azalea Gledstanesii, Notice of						45
	В.					
Babingtonia Camphorosma, Not			••	• •	• •	258
Bæckia Camphorosmæ, Notice of	f	• •	• •	• •	• •	115
Barkeria Lindleyana, Notice of		• •	• •	••	• •	212
Bay Leaves, revival of, frozen	• •	••	• •	• •	• •	116
Beaufortia decussata, Notice of			• •	• •	• •	212
Begonia, Affinity of the Genus			• •	• •	• •	142
incana, Notice of	• •	•	••	• •	• •	16
	• •	••	••	• •	• •	16
nitida	••	• •	• •	••	••	138
Berberis coriaria, Notice of	• •	••	••	• •		85
trifoliata		• •	••	• •		139
Bignonia speciosa, Notice of	• •	• •	• •	• •	• •	87
capreolata		••	• •	• •	• •	186
			_			

						FAUL
Bignonia australis	• •	••	••	••		47
Blight on Flowers, Reviewed		• •	• •	• •		234
Bolbophyllum imbricatum, No	tice of	• •				15
clandestinum		••		•	• •	188
Bomaria acutifolia var. puncta	ta			•	••	13
Book for Botanical Pronunciat						23
Boronia ledifolia, Notice of					••	
tryphylla, var. latifolia			••	••	••	65
		• •	• •	••	• •	111
ovata,	••		••	• •	• •	140
mollis	• •	• •	• •	• •	••	141
anethifolia	• •	• •	• •	••	• •	141
dichotoma	• •	• •	• •	• •	• •	141
falcifolia	• •	• •	• •	••		141
Bossiæa disticha, Notice of		• •		• •	15.	161
pauciflora	• •	• •				89
tenuicaulis	••		••	••		114
Botanic Society of London, Ev						47
Botany, First Book of, Reviewe		••			••	44
Brocoli, Preservation of, in Wi			••	••	••	
Bromheadia palustris, Notice o		••	••	••	••	33
	1	• •	••	••	• •	187
Brompton Stock, Culture of	. • •	••	••	• •	••	222
Brownea grandiceps, Notice of		• •	• •	• •		37
Brugmansia floribunda, Notice	of	• •	• •	• •		259
Budding, Remarks on		• •		••		1
Knife, Description of	New				••	3
Burdoch Spinach, Notice of		• •				237
- 11		••	••			137
Habit and	Treatmen	t of		••	••	165
	2.000	. 01	• •	••	• •	100
	c.					
	C.					
Calceolaria, Remarks on	• •		• •			130
Descriptive List of		• •			••	131
Query on		• •		• •		22
Suggestions on Imp	roving		••	••		68
Callistachys linearis, Notice of					••	64
Camellia Japonica Albertii, No	tice of			••	• •	
Pearsoniana			••	••	••	14
Carica Papaya, Uses of		••	••	••	• •	Ш
Caterpillars, Query on	••	••	••	• •	• •	213
	· .	••	• •	••	• •	23
Destruction of, on	Gooseberr	y Bushes		• •	• •	26
Catasetum trulla, Notice of	• •	• •				38
fuliginosum	• •	• •	• •			189
list of species		• •	••	••	••	38
Cattleya granulosa, Notice of	• •	••		• •		210
crispa			• •		-	184
Aclandie		••	••		••	259
Centropogon cordifolius, Notice		••	••	••	••	
Cephalotus follicularis, Culture		::		••	• •	187
Cereus cærulescens, Notice of	••		••	••	• •	198
Chandler's Nursery, Notes on	••	••	••	• •	• •	252
	••	• •	• •	••	• •	199
Cherry, Summer Pruning of		• •	• •	• •	• •	9
Chorozema spectabile, Notice of		• •	• •	• •	15	, 85
Dicksonii	••	• •	• •	• •		112
Chrysanthemum, Culture of	• •	• •	• •	••		200
descriptive list	of, new		• •	••		201
Cirrhopetalum Macræi, Notice	of	• •	••			66
maculosum	• •	••	••			187
Medusæ				••	••	
Clerodendron splendens, Notice	of	••	• •	• •	104	259
Cleome lutes, Notice of	••		••	••	164,	
		• •	• •			183

						AGE
Clianthus carneus, Notice of		In Card		C	Cture -	111
Climbing Plants, their approp	priateness	in Garde				041
Clintonia polabella Cultura a	. in mate	• •	• •	• •	108,	
Clintonia pulchella, Culture o		••	• •	••	• •	79
on Raising from See		• •	• •	••	••	11
Cobea stipularis, Notice of Cologyne Cumingii, Notice of	,	••	• •	••	• •	12
flaccida		• •	••	••	••	38
coronaria	••	••	••	••	••	164
		••	••	••	••	138
Coleus barbatus, Notice of	••	••	••	••	••	163
Conical Boilers, Stephenson's,	Notice of		••	••	• •	268
Convolvulus scoparius, Notice			••	::	••	86
Coryanthus maculatus, Notice		••	• •	• • • • • • • • • • • • • • • • • • • •	•••	143
Coxcomb, Cultivation of			••	• • • • • • • • • • • • • • • • • • • •	••	207
Crocus annulatus, var. Adamie	ona. Notic			•••	••	15
lagenæflorus, var. lacte			•••		•	18
Cucumber, Ayre's Treatise on				•••	::	- 10
Growing for seed						20
Management of the				•••	••	16
Cuphea Melvilla, Notice of			••	• • • • • • • • • • • • • • • • • • • •	••	138
Cymbidium pubescens, Notice	of			•••	•••	64
Cypripedium barbatum, Notice		••	••	••	••	89
insigne, Note on,			••	• •		26
Query			••	• •		71
Treatm		• •	••		77, 94,	100
Cyrtochilum maculatum, Noti	ce of		• •			64
	parviflore		••			45
filipes	• ••		••	••	43,	160
graminifolium	• •	• •	••	••		164
		D.				
Duhlias, List of new, Query		••	• •	• •		16
	• •		• •	• •	• •	113
Decayed Bark, Query on the			anure	• •	• •	144
Deep Potting, Effects of, on d			• •	• •	• •	177
Dendrobium aggregatum, On	-		••	• •	••	33
pulchellum		. •	• •	• •	••	134
macrophyllum, N		••	• •	••	• •	39
acerosum,	• •	••	••	• •	110	213
discolor	••	••	••	• •	112,	213
undulatum	••	••	••	••	••	188
excisum, secundum		••	••	• •	• •	18
Cambridgeanum	••	••	• •	••	• •	189
juncenm		••	• •	• •	• •	234
Demerara, Vegetation of, Note		••	• •	••	••	148
Detached Trees, Their position		en scenery	••	••	••	145
Digitalis lutea, var. fucata, Ne			••		••	233
Diplolæna Dampieri, Notice o		••		••	••	159
Dyckia altissima, Notice of			::	•••	::	164
Djenia aitissima, ivotico ei	••	••	••	••	••	
	1	E.				
Echinocactus corynodes, Notic	ce of					161
Education of Gardeners, Adva			• •	• •	121,	
Effect, in Flower Gardens, dep				• •	• •	68
Epidendrum miserum, Notice			• •	••	• •	14
microphyllum	• •			••	• •	15
hastatum	• •	• •	• •	• •	• •	42
aciculare					• •	42

Epidendru	m Graham	ii					141, 6	15
	putans							6
	raniferu	m	• •		• •			0
	phœnice	um	••		••	• •		10
	radiatun	3	• • .	• •	• •	• •	9	ю
	plerocar	pum	• •	• •			11	6
	articulat			• •			11	6
	calochei	lum	• •	• •		• •	13	8
	bisetum	• •			• •	• •	14	1
	virgatun	1	• •	• • •		• •	18	8
* .	latilabru	m	••	••		• •	18	8
	polyanti	num	• •	• •		• •	21	2
Epiphyllu				, Notice o	f	• •	1	5
Eranthemu	ım pulchel	lum, On fo	orcing	• •	••	• •	5	5
Eria armer	niaca, Noti	re of		• •	• •		15, 8	6
longil	labris	• •	• •	• •	•••	• •	1	5
pulch	ella	• •	• •	• •	• •		6	6
polyu	ıra	• •		• •	• •	• •	8	9
conve	llarioides	• •		• •	• •	••	89, 15	9
bipun	ctata	• •	• • •	••			16	
profu	88.	• •	• •	• •			21	
Erica Jack	sonii, Noti	ce of	• •	••			11	0
Lam	bertiana ro	sea				• •	19	i
Erigeron se	quarrosum.	Notice o	f	• •		• •	4	
Eucalyptus				••		• •	14	
Eulophia s			• •	• •	••	• •	18	
Euonymus			f	• • •	• • •	••	. 9	
Euterpe me			••	• • •	••	••	8	
Exotics, N						•••	4	_
				• •	• • •	••	•••	•
				F.				
First Book	of Botany	Reviewe	d				4	
Floricultur				ibitions o	ſ	•••	28, 10	
Flower Pot						• •	2.0	
Flowers, L				отретен	o monte	••	0.0	
Franciscea			10210 01			• •	1.0	_
Fruit-room			••	••	••	••		
	Arrangem				••	•••	12	
Fruit Trees			•••		• •	••	23	
Fuchsia, H					• •	••		7
	rugressive		ent of	• •	• •	••	6	
	oil adapted			• •	••	••	25	
	reatment of		t •	• • • • •	••	• •	9	
		*	• •	••	• •	• •	7	
	ordifolia, N		• •	• •	••	••	••••	
	urtisii		••	••	••	• •	90, 18	
	ouellii	••	• •	• •	• •	••	11	
	dicans	••	• •	• •	• •	• •	11	
	rince Alber		••	• •	• •	• •	117, 18	
r	IIICO ALDO		••	• •	••	• •	25	ti
				G.				
Galaandes	Dawonie	Matter						_
Galeandra				••	••	••	8	_
Garden Arc				•	••	••	., 3	
Genista bre			••	••	••	• •	13	_
Gentiana s				• •	••	••	1	
Geranium e				• •	••	••	4	
Germinatio	n or seeds,				••		19	3
C		Effects of	-	uon on	• •	••		4
Gesnera, T.			••	•	• •	• •	24	
di	scolor, No	uce of					150 4	9

All the control of th						AGE
Gesnera, bulbosa	••	•	••	••	••	87
mollis	• •	••	••	••	185,	
longifolia	• •	• •	••	• •		187
zebrina	••	••	••		191,	212
rupestris	• •	••	••	• •	••	191
Gladiolus, Culture of, in the ope		• • •	••	••	• •	249
Glazing Hothouses, Remarks on		••	••		156,	
Glossocomia ovata, Notice of	••	••	••	• •	••	209
Gloxinia, Treatment of	• •	• •	••	• •	••	241
Hybridization of	• •	• •	••	• •	••	20
Godetia albescens, Notice of	••	• •	••	• •		114
grandiflora	• •	• •	••	••		114
Goldfussia glomerata, Notice of	••	• •	••	••	64,	238
Gonatanthus sarmentosus, Notic	ce of	• •	••	••	••	43
Gonolobus hispidus, Notice of	••	••	••			137
Gongera maculata, var. alba, No	tice of	••	••	••	••	43
Grape, the Syrian, Notice of	••	••	••	••	• •	94
Causes of Rust on		• •	••	••		252
Shanking of	• •	• •	••			170
Greenhouse Plants, Culture of	• •	• •	••	• •	101,	202
Repotting of		• •	••	• •	• •	215
Grevillea sericea, Notice of	• •			• •	••	162
Grubs, Destruction of	• •		••	••		189
Guava, Culture of	• •			• •	••	132
	H	•				
Hemanthus magnificus, Notice						139
tenuiflorus, var. Mo			• •	••	••	12
Hakea ruscifolia, Notice of		Tafa	••	••	••	140
Hardenbergia macrophylla, Noti		••	••	••	••	211
Hard Water, Qualities and Effect		••	••	••	••	117
			••	••	••	160
Heimia salicifolia, var. grandiflo			••	••	••	40
Hellchrysum niveum, Notice of Helleborus orientalis, Notice of	••	••	••	••	••	89
	• •	••	••	••	••	89
olympicus Hemiandra emarginata, Notice o		••	••	••	••	140
Hesperis matronalis, Culture of		••	••	••	••	54
	•,•	••	••	••	**	41
Hibbertia perfoliata, Notice of	••	••	••	••	••	65
Hibiscus splendens, Notice of	••	••	••	••	••	115
Higginsia mexicana, Notice of	Notes o	make F	ubibistane	٠٠.	01.00	56
Horticultural Society of London	A mones e	of Mada	ls at Exhi	hitians	21, 29, 22, 46	-
					190, 236,	
Horticultural Society's Garden,			Meetings o			197
Houlletia vittata, Notice of			••	••	49	184
Brocklehurstiana	••	••	••	••		42
**	••	••	••	••	••	102
Hyacinth, Culture of	• •	••	••	••	••	126
	- ::	••	••	••	••	140
Hymenocallis panamensis, Notic		••	• •	••	••	113
-Hypocalyptus obcordatus, Notice	. 61	••	••	••	••	110
	1					
		•				3.0
Impatiens rosea, Notice of	• •	••	••	••	••	12
Inarching, Remarks on	• •	••	••	••	• •	3
Indigofera, Cultivation of	••	••	••	••	••	102
Ipomosa tyrianthina, Notice of	••	••	••	••	••	13
batatioides	••	••	••	••	••	62
Irritability of Plants		••		• •		67

	K.				PAGE
Kaulfussia amelloides, Notice of					'137
Kew Botanic Garden, Notes on					198
Kreysigia multiflora, Notice of		••		••	160
Ateysigia mutanora, rionee or	••	•••			
	L.				
Fully learningte Motion of					12
Lælia lacuminata, Notice of peduncularis	•••	•••			234
Lalage hovemfolia, Notice of				•••	43
Lasiopetalum macrophyllum, N					162
Lechenaultia biloba, Notice of	•••			••	84, 209
Lilium speciosum, var. album, N		••	••	••	65
Linaria venosa, Notice of	••		·	••	139
Light and Shade, Essential in a		6			237
Lignum Rhodium, Noticed			••	••	117
Lindenia rivalis, Notice of		••	••	••	114
Liparia, Cultivation of				• •	101
Loasa Pentlandica, Notice of	••		• •	••	260
Lobelia Cavanillesii, Notice of	••	••	• •	••	138
pyramidalis	••	••	••	••	188
Lophospermum erubescens, var.	spectabile	, Notic	e of	••	14
Lowe's Nursery, Note on	••	••	••	• •	142
Luculia gratissima, Culture of	••	• •	• •	• •	25
Lysimachia lobelioides, Notice o	f	• •	• •	••	139, 209
	M.	•			
Malva odorata, Notice of	••			••	13
Marcetia decussata, Notice of				••	41
Marianthus cerulea punctatus,	Notice of		••	••	113, 186
Martynia fragrans, Notice of		• •	••	••	208
Mathiola maderensis, Notice of	••		••	• •	42
Maxillaria Harrisonia, var. Notic	ce of	••	• •	••	15
stapelioides	• •	••	• •	• •	39
placanthera	••	• •		••	66
jugosa	••	••	••	••	60
barbata	• •	• •	••	••	115
purpurascens	• •	••	••	••	145
Skinneri	••	• •	••	••	260
Megaclinium bufo, Notice of	4.4		••	••	44
Mental Exertion, Necessity of		• •	••	••	59
Merthyr Coal, adapted for hothe	ouse furns	ices	••	••	262
Mignonette, Culture of, in pots	••	••	••	••	68
Mimulus, McLanii, Notice of	••	••	••	••	158, 233
Mina lobata, Notice of	••	••	••	••	213
Mirbelia floribunda, Notice of	1.	••	• •	••	. 137
speciosa	09 40 71	06.1	10 144 1	60 101	
Monthly Calendar, Mormodes pardina, Notice of	23, 48, 7				215, 238, 263 . 139
var. unicolor	••	•••	••	••	90
12	••	••	••	••	00
Annual Control of the	•.•	••	••	••	1400
aromaticum	••	••	••	••	188
Mule Pink, Culture of		••	••	••	155
Myanthus deltoides, Notice of	::	•••	••	••	232
Myosotis palustris, Noticed		••	••	••	165
Myrtle, Sacred to Venus	••		••	••	262
and a second second	••	••	••	••	
	N.				
Maturaliantian of Pustice					46
Naturalization of Exotica	••	• •	••	••	46
Neapolitan Violet, Culture of		- •			228

						PAGE
Nelumbium speciosum, Query or		••	••	••	••	95
Culture o	f	••	••	••	• •	175
var. Notice of	••	••	••	••	• •	211
Nepenthes distillatoria, Query or		••	••	••	• •	71
Culture o	of	••	••	••		101
Niphæa oblonga, Notice of	••	••	••	• •	189	, 209
Notylia aromatica, Notice of	•••	••	••	••	• •	43
Nycterinia Lychnidea, Culture o	f	••	••	• •	••	224
		0.				
01 . 1		•				
Odontoglossum pulchellum, Not	ice of	• •	••,	• •	• •	112
Rossii	• •	• •	••	• •	• •	40
Ehrenbergii	• •	••	••	• •	• •	42
Oil of Rhodium, Source of	••	••	••	••	+ 1	117
Olinia acuminata, Notice of	••	• •	••	• •	• •	115
cymosa	. • •	••	••	••	• •	115
Oncidium papilio, Query on	• •	• •	••	••	***	71
Culture of	• •	• •	• •	• •	78, 95	
monoceras, Notice of	••	• •	••	• •	87	, 141
ornithorhynchum	• •	• •	••	• •	• •	183
Barkeri	••	••	• •	• •	• •	187
nebulosum	• •	• •	• •	• •	• •	187
longifolium	• •	••	• •	• •	• •	210
Insleayii	• •	••	• •	• •		211
pergameneum	• •	• •	• •	• •	• •	213
Suttoni	• •	• •	• •	• •		213
	• •	• •	• •	• •		233
bicallosum	• •	••	• •	• •	• •	234
ensatum	• •	• •	• •	• •		260
Opuntia monacantha, Notice of	••	• •	• •	• •	• •	185
decumbens	• •	• •	• •	• •	••	185
Orange trees, imported, curious i	act rela	ated of	• •	• •	• •	47
in-arching of		• •	• •	• •	••	3
Orchidaceous plants, Cultivation	of `		• •	• •	• •	67
Fertilisation		• •	• •	• •	• •	143
Ornithogalum divaricatum, Notic	ce of	••	• •	• •	• •	89
Otochilus fusca, Notice of	• •	••	• •	• •	• •	211
Oxalis Deppeii, an esculent	• •	• •	• •		••	214
fruticosa, Notice of	• •	••		• •	••	86
lasiandra	• •	• •	• •			114
Oxylobium capitatum, Notice of		• •	••	••	• •	43
		P.				
Papaw tree, Uses of						213
Parterres, On forming	••	••	••	••	••	
Pascalia glauca, Notice of	• •	••	••	- ••	••	173 66
Divide I	••	••	• •	•	• •	
	••	••	••	••	••	152
	• •	• •	••	••	• •	214
Peach, Summer pruning of	••	••	••	• •	••	.8
Pear, Summer pruning of		••	• •	• •	• •	10
Pedicularis pyramidata, Notice o		••	• •	••	•••	140
Pelargonium, The improvement)1	••	••	• •		1, 49
Descriptive list of		• •	• •	• •	35, 50	
Properties of a	•••	• •	• •	••	• •	143
Rising Sun, Notice	10	• •	• •	• •	• •	109
Queen of Fairies	••	• •	• •	••	• •	135
Wonder	••	• •	••	• •	• •	135
Pentstemon campanulatus, Notic		• •	• •	••	••	64
gentianoides, its hard		••	••	••	••	23

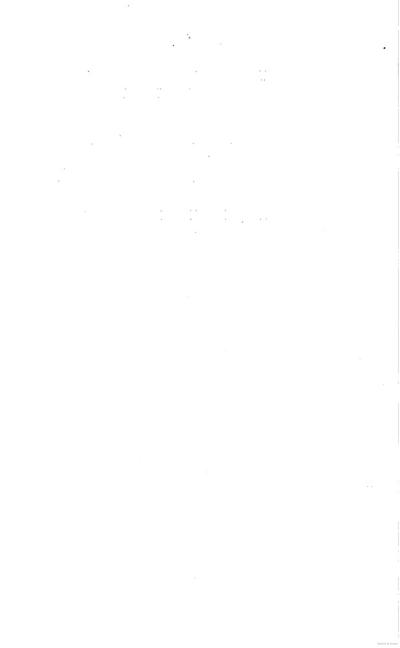
						1	PAGE
Persian	Melons, Culture of, in p	ots	••	••	• •	• •	204
Phaceli	a fimbriata, Notice of	••	• •	• •	• •	• •	114
Pharbit	is Learli, Notice of	• •	• •	• •	• •		137
Philade	lphus mexicanus, Notice	of	••	• •	• •	• •	90
Phlomi	simplex, Notice of			• •	• •	• •	66
	Culture of		• •		• •		179
	List of kinds					• •	181
1	Bridgesii, Notice of			••		• •	182
	Broughtonii				••		232
	thus auricomis, Notice of	ŧ				••	87
	spectabilis, Notice of	••	• •				38
	nes, Ancient use of	• •	••		• •	• •	94
	ists of kinds which obtain	ned the fir		Chiswick	k	••	71
	Olfersiana, Notice of	••		••			41
	ornata, Notice of		••			••	111
	List of, Figured in the I						
	Paxton's Magazine of					,	265
	irratibility of	••					67
	g fruit trees, and preparit						10
	hallis picta, Notice of			:.		114,	
I leal of		••	••		••		115
	11.3	••	••	••	••	••	187
		••	••	• •	• •	• •	188
		••	• •	• •	• •	• •	
Diam 6	fragilis	• •	••	••	• •	• •	188
	Summer pruning of		••	••	• •	• •	9
	ium berberisolium, Notic		••	••	• •	• •	41
	ca gnaphalioides, Notice	10	••	• •	• •		211
	plicata, Notice of	• •	••	••	• •	••	115
	um molle, Notice of		••	• •	• •	• •	188
	striata, Notice of	••	••	••	••	••	260
Portula	ca Thellusonii, Notice of	• •	••	• •	• •	9.4	162
_	Mallisouii	• •	••	••	• •	• •	191
	ria versicolor, Notice of	••	••	• •	• •	• •	11
	source of	• •	••	• •	• •	••	45
	emblem of beneficence	• •	••	• •	• •	• •	93
	la insignis, Notice of		••	• •		• •	63
	oodophylins, Notice of	••		••	• •	• •	164
	Hookeriana, Notice of	• •	••	• •	• •	• •	162
	es, double, Culture of	• •	• •	• •	• •	• •	231
Prince A	Albert Rose, Notice of		• •	• •	• •	• •	69
	Fuchsia, Not	ice of	• •	••	6.	• •	256
Prize E	ssay, on soils, reviewed				• •	17.	117
	ongiflora, Netice of	• •	••	••	••		115
Pultena	a brachytropis, Notice o	ſ		••	••	••	43
		•		• •	• •	•••	-
		Q					
	A	_					
Query o	n an Arnott Stove	•••	•••	•••	•••	•••	191
,	answered		•••	• • • •	•••	•••	191
	Book for Botanical pro		3	•••	•••	•••	23
			•••	•••	•••	***	23
	Bark, decayed, as man		•••	•••		•••	144
	Black Ant, destruction		•••	*** ****	•••	•••	119
	Calceolarias, raising of		•••	•••	•••	•••	22
	answered	•••	•••	•••	•••	•••	23
	Camellias, answered		• • •	•••	•••	•••	167
	Caterpillars, destruction	of	•••	•••	•••	•••	23
	answered	•••	•••	•••	•••	•••	26
	Cypripedium, Culture	of	•••	•••	•••	•••	71
	answered		•••	•••	•••	77, 95,	100
84.4	Dahlias, list of new				•••		167

				P	AGE
Query on Gardoquia Hookerii, Culture of	••	••		***	95
Nelumbium speciosum, Culture	of	••	•••	•••	95
answered		•••			175
Nepenthes distillatoria, Culture		•••	•••		71
answered		***	•••		101
Nierembergia intermedia, Cultur		•••	•••		95
Oncidium papilio, Culture of				•••	71
answered	•••	•••	•••		100
	•••	•••	•••	78, 95,	238
Onions, treading of	•••		• • •	•••	238
answered	•••	•• .	•••	•••	
Pinuses, Raising from seeds	•••	•••	•••		59
Plants for a small Conservatory	•	•••	•••	• • •	119
Roella ciliata, culture of	•••	•••	•••	•••	95
Saltpetre, For destroying grubs	infe	sting onions	• • •	•••	238
		ans	wered	i	23 8
Quietude and repose necessary to plants		•••	97,	151, 215,	242
R.					
					-
Regent's Park, Opening of, to the Public		_•••	•••	•••	20
Rest, Importance of, to plants	•••	**	•••	•••	97
Review of Ayres' Treatise on Cucumbers		***	•••	•••	16
Prize Essay, on soils	•••	•••	•••	17,	117
First Book of Botany		•••	•••	•••	44
Sentiment of Flowers	•••	•••	•••	•••	90
Blight on Flowers	•••	***	••	•••	234
Revival of Bay Leaves, after being froze				•••	116
Rhodanthe Manglesii, Culture of					80
	**	Doval Votice		•••	110
Rhododendron arboreum album, var. Prin				•••	
Gibsonii	•••	•••	•••	•••	163
Rhodorhiza, Notice of the genus	•••	•••	•••	***	117
Rigidella immaculata, Notice of	•••	•••	••	114,	184
Rockeries, Seclusion indispensable in	• • •	•••	•••	•••	93
Rocket, double white, Culture of	•••	•••	•••	•••	54
Rollison's, Messrs , Nursery, new Azalea	s at	•••		•••	45
Rooting of leaves of plants	••	***	•••		92
Root pruning, Experiment in, on peach	trees	•••	•••		244
Roots, Horizontal extension of, necessary		•••			7
of trees proportioned to the branch		•••	•••	•••	214
Roscoea lutea, Notice of		•••			141
Rosa Devoniensis, Notice of				112,	190
73 6 3 . 34 . 4					166
	•••	•••	•••	•••	69
Rose, Prince Albert, Notice of	•••	• •	•••	•••	
Ruellia elegans, Culture of	•••	•••	•••	•••	51
Rust on Grapes, Causes of	***	•••	•••	•••	252
S	•				
Saccolabium Blumei, Notice of			•••	•••	89
			•••		212
Salvia tubifera, Notice of				• •	
	•••	•••	•••	** .	87
confertiflora, var	•••	•••	•••	•••	139
excelsa	•••	•••	•••	•••	187
hians	•••	••	•••	•••	63
Scale, on Pines, Destruction of	***	•••	•••	•••	189
on Peach Trees, Destruction of	• • • •	***	•••	•••	214
Schomburgkia tibicinis, Notice of		•••	•••	••	90
Schweiggeria pauciflora, Notice of	•••	***	•••	•••	63
Schyzanthus Evansianus, Notice of	•••		•••		112
Scuttelaria splendens, Notice of		•••	•••	•••	115
Seeds, Germination of		•••	•••	•••	193
Effects of gravitatio				•••	4
Enects of gravitatio	M VU	•••	••	***	-

2 Q

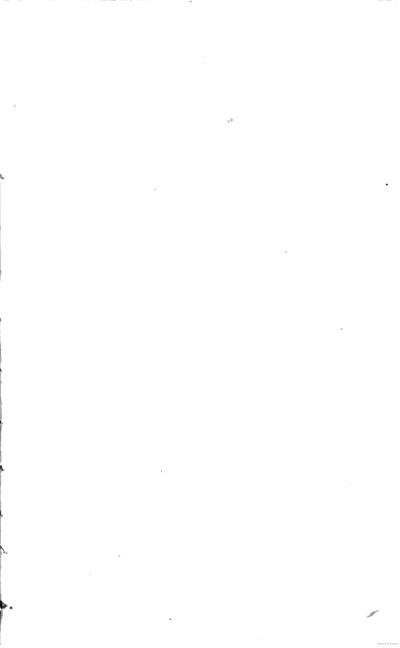
					F	AGE
Selection of cuttings for propaga	ation	•••	•••	•••	•••	215
Sentiment of Flowers, Reviewed		•••	•••	•••		90
Sickly greenhouse plants, Treat	ment of	•••		•••	•••	176
Sida Bedfordiana, Notice of		•••	•••	•••	•••	113
Siphocampylos revolutus, Notic	e of	•••	•••	•••	•••	65
Snails, On preventing their dep				••	•••	178
Soils of East Suffolk, Essay on		1	•••	•••	17.	117
South London Floricultural Soc						104
Spirma lanceolata, Notice of			•••	••	•••	42
fissa		•••		•••	•••	212
Spiranthus cerina, Notice of		•••				261
Sprekelia cybister, Notice of		•••	•••	•••	•••	13
Stachys coccinea, Notice of	•••					41
Stanhopen Martiana, Notice of	•••	•••	•••	••	•••	141
	•••	•••	•••	•••	•••	
s, Culture of	•••	•••	•••	•••	•••	150
Statice Dickinsonii, Notice of		•••	***	•••	•••	61
Treatment	01	•••	•••	•••	•••	62
monopetala, Notice of	•••	•••	•••	•••	•••	136
grandiflora	•••	• • •	•••	•••	•••	165
arborea, Treatment of	•••	•••	•••	•••	•••	53
Stelis crassifolia, Notice of	•••	••	•••	•••	•••	234
Statues, Sites adapted for, in ga	rdens	•••	•••	•••	•••	166
St. Michael Orange, Note on	•••	•••	•••	•••	•••	69
Stephenson's Conical Boilers, N	otice of	•••	••	•••	•••	263
Stigmaphyllon ciliatum, Notice	of	•••	•••	•••	•••	141
Strobilanthes scabra, Notice of	•••	•••	• • •	•••	•••	38
sessilis	•••	•••		•••	•••	139
Streams, Effect of, in landscape	•••		•••	•••		237
Stylidium Brunonianum, Notic		•••	•••	•••	• • •	42
proliferum		••	•••	•••	•••	43
pilosum	•••		•••	•••	•••	43
ciliatum	•••	• • •	•••	•••		64
recurvum		•••		•••		185
Stuartia pentagyna, Notice of	•••	•••		•••		210
Succession of plants for the sun					•••	226
	-				•••	
Summer Pruning of fruit trees	•••	•••	•••	•••	•••	7
Syrian Grape, Notice of	•••	•••	•••	***	• • •	94
	TT.					
	Т	•				
Tabernæmontana dichotoma, N	otice of		•••	•••	•••	136
Templetonia, Culture of	•••	•••	•••	•••		202
Tigridia violacea, Notice of		•••	•••	•••	•••	115
Tithonia ovata, Notice of	•••	•••	•••	•••		139
Transplantation of Trees and Sh		•••	•••	•••	•••	217
Triptilion spinosum, Note on		•••	•••	•••		93
Triteleia aurea, Notice of					•••	188
Tropæolum, Treatment of, recen	tly impo					82
Moritzianum, Notic		tuber.				40
Tropæolaceæ, its claim to rank s		ral Ordan	•••	•••	•••	93
Tulipa tricolor, Notice of			•••	••	•••	87
	• • •	•••	•••	•••	•••	
s, Properties of	***	•••	•••	•••	•••	153
	**					
	v	•				
Vegetable Kingdom, Source of I	Potash	•••	•••	•••	•••	45
Verbena variegata, Notice of	•••		•••	•••	•••	116
Vessels, Existence of ascending		nding, in	plants		•••	5
Victoria Park, Preparations for					•••	166
Vine, Pruning of	•••			•••		148
Summer Pruning of	•••	•••	•••	•••	•••	9
Propagation of		•••	•••			146

						FAUD
Vine, Planting of	•••	•••	•••	•••	••	147
Forcing the	•••	•••	•••	•••	148	169
Borders, Formation of	•••	•••	• • •	•••	170	254
Violet Neapolitan, Culture of	•••	***	•••	***	•••	228
		w.				
Well Water, Its components						117
		***		•••	•••	
Winter Gardens of St. Peters	burg, De	scription of	10	•••	•••	143
Witsenia Maura, Notice of	•••	•••	•••	•••	•••	163
		Y.				
Young Gardeners, Mental Ex	ertion, ne	cessity of	in			59
Education					191	, 248
Education	OI .	•••	•••	•••	141	240
		\mathbf{Z} .				
Zichya villosa, Notice of		•••	•••	•••	•••	48
pannosa	•••	•••	•••	•••	•••	83



.

,





14 DAY USE RETURN TO DESK FROM WHICH BORROWED

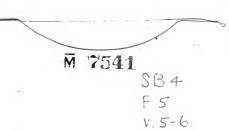
LOAN DEPT.

This book is due on the last date stamped below, or on the date to which renewed.

Renewed books are subject to immediate recall.

160ct'63MF	
REC'D LD	
OCT 1 6'63-5 PM	
LD 21A-40m-4,'63 (D6471s10)476B	General Library University of California Berkeley

YC 61564



THE UNIVERSITY OF CALIFORNIA LIBRARY



